Appendix A – Spacecraft/Launch Service Systems

1.0 Purpose and Scope

This appendix identifies the critical facilities, systems, and equipment comprising spacecraft/launch service systems at Cape Canaveral Air Station. Other facilities, systems, and/or equipment may be added as mission requirements develop or change. All systems identified are to be operated, maintained, certified, configuration controlled, and sustained by the contractor, unless otherwise noted.

Appendix A-1 – Systems/Equipment Definitions

Systems/Equipment Database Definitions

Communication

- **Antennas** – Antenna and all components, including rotator, rotator controller, cabling, and tubing.
- **CCTV** – Internal (Intra-Facility) cabling and equipment from Main Distribution Frame Panel connector to all distribution points, including conduit.
- **Narrowband Transmission** – Internal (Intra-Facility) cabling and equipment from Filter Panel (downstream of MDF Panel) to all distribution points, including conduit.
- **Public Address System** – Internal (Intra-Facility) cabling, conduit, and all associated hardware and software. Does not include speakers.
- **RF Transmission** – Internal (Intra-Facility) cabling/tubing and equipment from antenna connection to all internal distribution points, including conduit.
- **Telephone/LAN Wiring** – Internal (Intra-Facility) cabling only. Interface point at wire coming out of the communication panel to plug in to end-item. Communication panel and end-item are not the responsibility of LO&SC.
- **TOPS/Digital Voice** – Internal (Intra-Facility) Racks, cabling, conduit, and associated hardware and software. Does not include end-units.
- **Wide Band Transmission** – Internal (Intra-Facility) cabling and equipment from Main Distribution Frame (MDF) Panel to all internal distribution points.

Electrical

- **Grounding** – Technical, facility, and lightning grounding. Includes installed grids, receptacles, bus bars, down conductors, air terminal, and ground rods which make up equipment, technical, and static grounds; also includes conductive tile, conductive coatings, bonding, and grounding.
- **High Voltage** – All systems/components above 480V.
- **Low Voltage** – UPS, IPS, automatic or manual, back-up diesel generators, where dedicated, and all associated circuits including electrical/motor backup generator's and associated hook-up points. All components from, and including, the low voltage connector of the power

transformer includes: the bus bar, all circuits, switch gears, and outlets supplying power throughout the facility, internal/external bulbs, fixtures, and ballast's emergency lighting. Interface point is first facility main disconnect which is 480V or lower (includes the disconnect).

Environmental

- **Cleanroom** – Monitoring, detection, and reporting systems for particulate matter and non-volatile residue; also includes: walls, floor, ceiling, air shower assemblies, all clean-room garments, shoe cleaners, floor vacuums, and floor.
- **Fire Protection** – Suppression and detection. Includes piping, interior alarm wiring, valves, nozzles, software controls, detectors, warning, and all associated hardware. Interface point for a wet system, is cut-off valve prior to the riser and includes the valve.
- **HVAC** – HVAC (Heating, Ventilating, and Air Conditioning) includes: software, air handlers, motors, drive assemblies, chillers, compressors, cooling towers, boilers, humidifier/dehumidifier, air exhaust, purge fans, associated pneumatic and electronic monitor and control components, and all associated support equipment.
- **Oxygen Hazard Monitoring** – Detection and reporting systems for Oxygen depletion.
- **Propellant Vapor Detection** – Detection and reporting systems for propellant vapors.

Equipment

- **Cold Soak** – Operation and maintenance of Cold-Soak equipment.
- **Facility Control Monitoring Systems** – Operation and maintenance of all facility control monitoring systems. Includes all cabling, consoles, and associated equipment.
- **Online Lightning Monitoring System** – Sensors, wiring, conduit, portable and installed monitoring devices (workstations). Start date is 1 Oct 98.
- **Railroad** – All railroad tracks and subsurface below tracks, locomotives, flat rail cars, rail ties, rail splices, track switches, etc. (Includes rails inside facilities, as well as outdoor.)
- **Security Alarm System** – Operation and maintenance of security alarm system and all associated equipment. (This is not the Advanced Technology Electronic Security System.)
- **X-Ray** – Operation and maintenance of all X-ray equipment.

Fluid and Gas

- **Breathing Air** – Breathing Air from, and including, the tube bank connector to, and including, the facility-installed breathing air connector.
- **Compressed System Air** – Compressed System Air from, and including, the compressor intake to, and including, the facility installed connectors.
- **Fuel** – Includes fuel fill, vent, drain, and scrubbers.
- **Gaseous CO2 System** – Includes dewar, piping, dry ice generation, etc.
- **Gaseous Helium System** – Gaseous Helium from, and including, the tube bank connector to, and including, the facility-installed interface.
- **Gaseous Nitrogen** – From and including installed pressure vessels, the tube bank connector or designated control valve to, and including, the facility-installed interface.

- **Inert Gas Exhausts** – Includes: vent, fan, and facility installed piping.
- **Liquid Helium** – Liquid Helium dewar and fill panel.
- **Liquid Hydrogen System** – Includes: tank, all plumbing and valving, support structure and brackets, control panels.
- **Liquid Nitrogen System** – Includes: tank, all plumbing and valving, support structure and brackets, control panels, etc
- **Liquid Oxygen System** – Includes: tank, all plumbing and valving, support structure and brackets, control panels.
- **Miscellaneous Support Equipment** – Includes portable gas panels.
- **Oxidizer** – Includes oxidizer fill, vent, drain, and scrubbers.
- **Propane** – Includes tank, piping, burner assembly, and interface system to commodity vent lines.

Mechanical

- **Access Platforms** – Movable platforms, cabling, moving mechanism (electric, air, fluid, and/or manual).
- **Crane Support Equipment** – Test weights, slings, rigging, hydro-sets, etc.
- **Cranes and Hoists** – Bridge cranes, hoists, controls/consoles, rails, and software.
- **Elevators** – Includes motor, cabling, weights, software, controls, etc.
- **Misc. Support Equipment**
- **MST Traction Drive** – Motor, cabling, hydraulic lifts, associated panels and controls, consoles, all hydraulic hosing, brakes, cable reels, rails, and associated hardware and software.
- **Spin Balance Machine** – Includes spin table and all associated panels and controls.

Safety

- **Eye Washes /Decontaminate Showers** – Shower walls, sprinkler heads, valves, catch basins, supporting system, and associated hardware.
- **Fall Protection** – Handrails, chains, life line attachment points, etc.
- **Hazard Notification** – Electric and pneumatic evacuation horns, and associated hardware; area warning lights, casting, controls, wiring, and associated mounting hardware.

Structure

- **Basic Structure** – Maintenance and repair, corrosion control, ablative coating, and painting, on walls, windows, door, roofs, ceilings, impenetrable coatings, conduit, non-conductive/non-clean room floors, and all parts providing the barrier between interior and exterior environment, including: personnel access doors, catwalks and ladders, etc.
- **Camera Towers** – Corrosion control and maintaining structure itself.
- **Spacecraft Leak Chamber** – Maintenance and cleaning
- **Special Purpose Doors** – Cleanroom doors, roll-up doors, vertical lift, airlock doors, blast doors, and all associated controls and mechanisms.
- **Special Purpose Flooring** – Computer flooring, conductive flooring, air pallet flooring, etc.

Water

- **Containment** – Industrial effluent and sediment, including disposal, pumps, piping, valves, etc.
- **Deluge/Overpressure Suppression** – Valves, pipes, nozzles, monitoring and control system, and associated hardware.
- **Potable Water** – All domestic water. Facility plumbing and associated hardware.
- **Pump Station Equipment** – Including all equipment and hardware associated with providing pressurized water, including but not limited to tanks, pipes, pumps, etc. Interface is the outlet side of cut-off valve supplying water to the pump station supply tank.
- **Sanitary Sewer** – Interface is downstream side of the potable water supply valve, includes toilets, sinks, storm drains, etc.

Appendix A-2 – Spacecraft Service Systems

1.0 Purpose and Scope

This appendix identifies the critical facilities, and some of the systems and equipment in those facilities, supporting spacecraft service systems at CCAS.

2.0 Responsibilities

Spacecraft Service Systems are composed of, but not limited to, the following components in Figure A-2-1, Spacecraft Critical Facilities Database, shown on pages A-5 through A-13. It identifies the systems and equipment in each of the critical spacecraft service facilities which the LO&SC shall operate and maintain.

3.0 Facilities

Spacecraft service facilities listed below require Facility Management. Facilities include, but are not limited to:

3.1 ESA 60 Complex
3.2 E & L, Facility 1704
3.3 Area 59
3.4 SAB Compound
3.5 Spacecraft Processing Integration Facility (SPIF) area
3.6 Launch Support Facility area
3.7 ITL X-Ray area

Figure A-2-1 Spacecraft Critical Facilities Database		
DSCS Processing Facility – Facility 55820		
System	**Sub-system**	**Notes**
Communication	Public Address System	
Communication	Telephone/LAN wiring	
Communication	TOPS/Digital Voice	
Communication	CCTV	
Communication	Narrow band Transmission	
Communication	RF Transmission	
Communication	Wide band Transmission	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	Oxygen Hazard Monitoring	
Environmental	HVAC	
Environmental	Propellant Vapor Detection	
Environmental	Cleanroom	
Environmental	Fire Protection	
Equipment	Facility Control Monitoring Systems	
Fluid and Gas	Gaseous Nitrogen	
Fluid and Gas	Misc. Support Equipment	
Fluid and Gas	Inert Gas Exhausts	
Fluid and Gas	Oxidizer	
Fluid and Gas	Compressed System Air	
Fluid and Gas	Fuel	
Fluid and Gas	Breathing Air	
Fluid and Gas	Gaseous Helium System	
Mechanical	Spin Balance Machine	
Mechanical	Access Platforms	
Mechanical	Crane Support Equipment	
Mechanical	Cranes and Hoists	
Mechanical	Misc. Support Equipment	Personnel lifts, Condor, electrical forklifts, portable platforms, rails, fittings, scaffolding, upright airlifts, utility air-bearing pallets, transporter air pallets, and controllers, etc.
Safety	Hazard Notification	
Safety	Eye washes/Decontaminate showers	
Structure	Spacecraft leak chamber	
Structure	Basic Structure	
Structure	Special Purpose Doors	
Structure	Special Purpose Flooring	
Water	Potable Water	
Water	Sanitary Sewer	

Figure A-2-1 Spacecraft Critical Facilities Database (continued)		
Generator Building – Facility 34716		
System	**Sub-system**	**Notes**
Communication	Public Address System	
Communication	TOPS/Digital Voice	
Communication	Telephone/LAN wiring	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	HVAC	
Environmental	Fire Protection	
Structure	Special Purpose Doors	
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	
Interim Hardware Storage Facility – Facility 34715		
System	**Sub-system**	**Notes**
Communication	TOPS/Digital Voice	
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	HVAC	
Environmental	Fire Protection	
Structure	Special Purpose Doors	
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	
Launch Support Facility – Facility 1777		
System	**Sub-system**	**Notes**
Communication	Public Address System	
Communication	Telephone/LAN wiring	
Communication	TOPS/Digital Voice	
Communication	Wide band Transmission	
Communication	RF Transmission	
Communication	Narrow band Transmission	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	Fire Protection	
Environmental	HVAC	
Equipment	Facility Control Monitoring Systems	
Equipment	Security Alarm System*	
Structure	Basic Structure	
Water	Potable Water	
Water	Sanitary Sewer	

***Not a requirement for Option Period 2 (FY 00)**

Figure A-2-1 Spacecraft Critical Facilities Database (continued)		
Navstar Processing Facility – Facility 55810		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	Wide band Transmission	
Communication	RF Transmission	
Communication	Narrow band Transmission	
Communication	CCTV	
Communication	TOPS/Digital Voice	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	HVAC	
Environmental	Cleanroom	
Environmental	Fire Protection	
Equipment	Facility Control Monitoring Systems	
Fluid and Gas	Misc. Support Equipment	
Fluid and Gas	Gaseous Nitrogen	
Fluid and Gas	Compressed System Air	
Mechanical	Misc. Support Equipment	Personnel lifts, Condor, electrical forklifts, portable platforms, rails, fittings, scaffolding, upright airlifts, utility air-bearing pallets, transporter air pallets, and controllers, etc.
Mechanical	Cranes and Hoists	
Mechanical	Access Platforms	
Mechanical	Crane Support Equipment	
Safety	Eye washes/Decontaminate showers	
Safety	Hazard Notification	
Structure	Special Purpose Doors	
Structure	Basic Structure	
Structure	Special Purpose Flooring	
Water	Sanitary Sewer	
Water	Potable Water	
Navstar Satellite Storage Facility – Facility 55815		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	TOPS/Digital Voice	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	HVAC	
Environmental	Fire Protection	
Equipment	Facility Control Monitoring Systems	
Fluid and Gas	Compressed System Air	

Figure A-2-1 Spacecraft Critical Facilities Database (continued)		
Navstar Satellite Storage Facility – Facility 55815 (concluded)		
System	**Sub-system**	**Notes**
Fluid and Gas	Misc. Support Equipment	
Mechanical	Cranes and Hoists	
Mechanical	Misc. Support Equipment	Personnel lifts, Condor, electrical forklifts, portable platforms, rails, fittings, scaffolding, upright airlifts, utility air-bearing pallets, transporter air pallets, and controllers, etc.
Mechanical	Crane Support Equipment	
Safety	Eye washes/Decontaminate showers	
Safety	Hazard Notification	
Structure	Special Purpose Doors	
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	
Propellant Conditioning Facility – Facility 55885		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Communication	TOPS/Digital Voice	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	HVAC	
Environmental	Fire Protection	
Equipment	Facility Control Monitoring Systems	
Fluid and Gas	Misc. Support Equipment	
Fluid and Gas	Fuel	
Mechanical	Misc. Support Equipment	Personnel lifts, Condor, electrical forklifts, portable platforms, rails, fittings, scaffolding, upright airlifts, utility air-bearing pallets, transporter air pallets, and controllers, etc.
Mechanical	Cranes and Hoists	
Mechanical	Crane Support Equipment	
Safety	Hazard Notification	
Safety	Eye washes/Decontaminate showers	
Structure	Special Purpose Flooring	
Structure	Basic Structure	
Structure	Special Purpose Doors	
Water	Sanitary Sewer	
Water	Potable Water	

Figure A-2-1 Spacecraft Critical Facilities Database (continued)		
Propellant Servicing Facility – Facility 55840		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Communication	CCTV	
Communication	TOPS/Digital Voice	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	HVAC	
Environmental	Cleanroom	
Environmental	Fire Protection	
Equipment	Facility Control Monitoring Systems	
Fluid and Gas	Compressed System Air	
Fluid and Gas	Fuel	
Fluid and Gas	Gaseous Nitrogen	
Fluid and Gas	Misc. Support Equipment	
Fluid and Gas	Gaseous Helium System	
Mechanical	Misc. Support Equipment	Personnel lifts, Condor, electrical forklifts, portable platforms, rails, fittings, scaffolding, upright airlifts, utility air-bearing pallets, transporter air pallets, and controllers, etc.
Mechanical	Cranes and Hoists	
Mechanical	Crane Support Equipment	
Safety	Eye washes/Decontaminate showers	
Safety	Hazard Notification	
Structure	Special Purpose Doors	
Structure	Special Purpose Flooring	
Structure	Basic Structure	
Water	Potable Water	
Water	Sanitary Sewer	
Satellite Assembly Bldg – Facility 49904		
System	**Sub-system**	**Notes**
Communication	TOPS/Digital Voice	
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Communication	Wide band Transmission	
Communication	Narrow band Transmission	
Communication	RF Transmission	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	Fire Protection	
Environmental	Cleanroom	
Environmental	HVAC	

Figure A-2-1 Spacecraft Critical Facilities Database (continued)		
Satellite Assembly Bldg – Facility 49904 (concluded)		
System	**Sub-system**	**Notes**
Equipment	Facility Control Monitoring Systems	
Fluid and Gas	Gaseous Helium System	
Fluid and Gas	Misc. Support Equipment	
Fluid and Gas	Inert Gas Exhausts	
Fluid and Gas	Compressed System Air	
Fluid and Gas	Gaseous Nitrogen	
Mechanical	Misc. Support Equipment	Personnel lifts, Condor, electrical forklifts, portable platforms, rails, fittings, scaffolding, upright airlifts, utility air-bearing pallets, transporter air pallets, and controllers, etc.
Mechanical	Cranes and Hoists	
Mechanical	Crane Support Equipment	
Safety	Eye washes/Decontaminate showers	
Safety	Hazard Notification	
Structure	Basic Structure	
Structure	Special Purpose Flooring	
Structure	Special Purpose Doors	
Water	Potable Water	
Water	Sanitary Sewer	
Satellite Assembly Bldg Annex – Facility 1613		
System	**Sub-system**	**Notes**
Communication	Narrow band Transmission	
Communication	TOPS/Digital Voice	
Communication	CCTV	
Communication	RF Transmission	
Communication	Wide band Transmission	
Communication	Public Address System	
Communication	Telephone/LAN wiring	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	Fire Protection	
Environmental	HVAC	
Equipment	Facility Control Monitoring Systems	
Structure	Special Purpose Flooring	
Structure	Basic Structure	
Water	Potable Water	
Water	Sanitary Sewer	

Figure A-2-1 Spacecraft Critical Facilities Database (continued)

Space Launch Support Facility– Facility 73700, 73701		
System	**Sub-system**	**Notes**
Communication	TOPS/Digital Voice	
Communication	Public Address System	
Communication	Telephone/LAN wiring	
Communication	Wide band Transmission	
Communication	Narrow band Transmission	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	Fire Protection	
Environmental	HVAC	
Structure	Special Purpose Flooring	
Structure	Special Purpose Doors	
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	
Spacecraft Processing & Integration Facility – Facility 70000, 70514		
System	**Sub-system**	**Notes**
Communication	RF Transmission	
Communication	TOPS/Digital Voice	
Communication	Narrow band Transmission	
Communication	Wide band Transmission	
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Communication	Antennas	IUS S-Band Antenna, S-Band and L-B and Antennas (5 48-inch parabolic antennas per payload integration cell).
Communication	CCTV	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	HVAC	
Environmental	Oxygen Hazard Monitoring	
Environmental	Propellant Vapor Detection	
Environmental	Cleanroom	
Environmental	Fire Protection	
Equipment	Security Alarm System	
Equipment	Facility Control Monitoring Systems	
Fluid and Gas	Compressed System Air	
Fluid and Gas	Inert Gas Exhausts	
Fluid and Gas	Misc. Support Equipment	
Fluid and Gas	Breathing Air	
Fluid and Gas	Gaseous Nitrogen	

Figure A-2-1 Spacecraft Critical Facilities Database (continued)

Spacecraft Processing & Integration Facility – Facility 70000, 70514 (concluded)		
System	**Sub-system**	**Notes**
Fluid and Gas	Gaseous Helium System	
Fluid and Gas	Fuel	
Fluid and Gas	Oxidizer	
Mechanical	Access Platforms	
Mechanical	Cranes and Hoists	
Mechanical	Crane Support Equipment	
Mechanical	Elevators	
Mechanical	Misc. Support Equipment	Fontaine trailer, personnel lifts, Condor, electrical forklifts, portable platforms, rails, fittings, scaffolding, upright airlifts, utility air-bearing pallets, transporter air pallets, and controllers, etc.
Safety	Hazard Notification	
Safety	Eye washes/Decontaminate showers	
Safety	Fall Protection	
Structure	Special Purpose Flooring	
Structure	Special Purpose Doors	
Structure	Basic Structure	LO&SC also has fuel-farm.
Water	Sanitary Sewer	
Water	Potable Water	
Technical Support Mechanical Bldg – Facility 34706		
System	**Sub-system**	**Notes**
Communication	TOPS/Digital Voice	
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	HVAC	
Environmental	Fire Protection	
Structure	Special Purpose Doors	
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	
Technical Support Facility – Facility 34705		
System	**Sub-system**	**Notes**
Communication	Wide band Transmission	
Communication	TOPS/Digital Voice	
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Communication	CCTV	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	HVAC	

Figure A-2-1 Spacecraft Critical Facilities Database (concluded)		
Technical Support Facility – Facility 34705 (concluded)		
System	**Sub-system**	**Notes**
Environmental	Fire Protection	
Structure	Special Purpose Flooring	
Structure	Special Purpose Doors	
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	
X-Ray – Facility 70659		
System	**Sub-system**	**Notes**
Communication	Public Address System	
Communication	Telephone/LAN wiring	
Communication	TOPS/Digital Voice	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	Fire Protection	
Environmental	HVAC	
Equipment	X-Ray	Operation and maintenance of all X-Ray, film processing, silver recovery equipment
Equipment	Cold Soak	Operation and maintenance of Cold-Soak equipment
Fluid and Gas	Compressed System Air	
Mechanical	Cranes and Hoists	Installed bridge cranes, hoists, and associated cabling and controls
Mechanical	Crane Support Equipment	
Safety	Eye washes/Decontaminate showers	
Safety	Hazard Notification	
Structure	Basic Structure	
Structure	Special Purpose Flooring	
Structure	Special Purpose Doors	
Water	Potable Water	
Water	Sanitary Sewer	

Appendix A-3 – Delta Service Systems

1.0 Purpose and Scope

This appendix identifies the critical facilities, and some of the systems and equipment in those facilities, supporting Delta launch vehicle service systems at CCAS.

2.0 Responsibilities

Delta Launch Service Systems are composed of, but not limited to, the following components in Figure A-3-1, Critical Facilities Database, shown on pages A-14 through A-20. It identifies the systems and equipment in each of the critical Delta facilities which the LO&SC shall operate and maintain. (text continued on page A-21)

3.0 Facilities

Delta service facilities listed below require Facility Management. Facilities include, but are not limited to:

3.1 Delta Operation Building (OB) area
3.2 Space Launch Complex 17
3.3 Hangar M area
3.4 Hangar AO area
3.5 Flight Hardware Storage Facility, Facility 49934
3.6 Area 55
3.7 Area 57
3.8 Solid Motor Storage Facility, Facility 35420
3.9 Pump Station #1 area
3.10 Booster Processing Facility area (formerly Delta Spin Test Facility)
3.11 Complex 18

Figure A-3-1 Delta Critical Facilities Database

2nd Stage Checkout Facility – Facility 56636		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	TOPS/Digital Voice	
Communication	Public Address System	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	HVAC	4 ton
Environmental	Fire Protection	
Safety	Hazard Notification	
Safety	Eye washes/Decontaminate showers	
Structure	Basic Structure	
Structure	Special Purpose Doors	
Water	Sanitary Sewer	
Water	Potable Water	

Figure A-3-1 Delta Critical Facilities Database (continued)		
Booster Processing Facility – Facility 67900		
System	**Sub-system**	**Notes**
Communication	TOPS/Digital Voice	
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	Fire Protection	
Environmental	HVAC	30 ton - 20 ton
Fluid and Gas	Compressed System Air	
Safety	Eye washes/Decontaminate showers	
Safety	Hazard Notification	
Structure	Special Purpose Doors	
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	
CX-17 A & B – Facility 1270		
System	**Sub-system**	**Notes**
Communication	TOPS/Digital Voice	
Communication	Public Address System	
Communication	CCTV	
Communication	Narrow band Transmission	
Communication	Antennas	S-Band, C-Band, and UHF test antennas located on wind tower 002, and SLC-17 Blockhouse and grounds
Communication	RF Transmission	
Communication	Wide band Transmission	
Communication	Telephone/LAN wiring	
Electrical	Low Voltage	Interface: Load side of substations 2,3, ICC, CCC, and TC.
Electrical	Grounding	
Environmental	Fire Protection	Interfaces are Fire Water Pits 1, 2, 3, and 7.
Environmental	Cleanroom	
Environmental	HVAC	All systems except system in Launcher Building that supports fairing air and boat tail. 3 – 120 ton units
Environmental	Oxygen Hazard Monitoring	
Equipment	Facility Control Monitoring Systems	
Equipment	Online Lightning Monitoring System	
Fluid and Gas	Liquid Nitrogen System	
Fluid and Gas	Compressed System Air	
Fluid and Gas	Liquid Oxygen System	Joint ML VII/LO&SC responsibility
Fluid and Gas	Gaseous Nitrogen	
Fluid and Gas	Breathing Air	
Fluid and Gas	Liquid Helium	
Mechanical	Cranes and Hoists	
Mechanical	Elevators	
Mechanical	Access Platforms	

Figure A-3-1 Delta Critical Facilities Database (continued)		
CX-17 A & B – Facility 1270 (concluded)		
System	**Sub-system**	**Notes**
Mechanical	Crane Support Equipment	
Mechanical	MST Traction Drive	
Safety	Eye washes / Decontaminate showers	
Safety	Hazard Notification	
Safety	Fall Protection	
Structure	Special Purpose Flooring	White Room Floors, Blockhouse floors
Structure	Special Purpose Doors	White Rooms - east, south, and roof doors, Blockhouse blast door
Structure	Camera Towers	
Structure	Basic Structure	
Water	Deluge/Overpressure suppression	
Water	Potable Water	
Water	Sanitary Sewer	
Water	Containment	
Delta Operations Bldg – Facility 85125		
System	**Sub-system**	**Notes**
Communication	Public Address System	
Communication	CCTV	
Communication	Narrow band Transmission	
Communication	TOPS/Digital Voice	Digital Voice
Communication	RF Transmission	
Communication	Wide band Transmission	
Communication	Telephone/LAN wiring	
Electrical	Low Voltage	Interface: Load side of transformers DLOC1 and DLOI2
Electrical	Grounding	
Environmental	Fire Protection	
Environmental	HVAC	2 - 175 ton units
Equipment	Facility Control Monitoring Systems	
Mechanical	Elevators	
Structure	Basic Structure	
Structure	Special Purpose Doors	Roof Mechanical Room Access Door
Structure	Special Purpose Flooring	
Water	Sanitary Sewer	
Water	Potable Water	
Delta Storage Facility – Facility 60510		
System	**Sub-system**	**Notes**
Communication	Public Address System	
Communication	TOPS/Digital Voice	
Communication	Telephone/LAN wiring	
Communication	Wide band Transmission	
Communication	Narrow band Transmission	

Figure A-3-1 Delta Critical Facilities Database (continued)		
Delta Storage Facility – Facility 60510 (concluded)		
System	**Sub-system**	**Notes**
Electrical	Grounding	
Electrical	Low Voltage	Interface: Load side of transformer DIMCO.
Environmental	HVAC	
Environmental	Fire Protection	
Fluid and Gas	Compressed System Air	
Safety	Eye washes/Decontaminate showers	
Structure	Special Purpose Doors	
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	
Flight Hardware Storage Facility – Facility 49934		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	HVAC	
Environmental	Fire Protection	
Structure	Special Purpose Doors	
Structure	Basic Structure	
Hangar AO – Facility 60530		
System	**Sub-system**	**Notes**
Communication	Public Address System	
Communication	Telephone/LAN wiring	
Communication	Narrow band Transmission	
Communication	Wide band Transmission	
Communication	TOPS/Digital Voice	
Electrical	Low Voltage	Interface: Load side of transformers HAOI3 and HAOI2.
Electrical	Grounding	
Environmental	HVAC	375 ton
Environmental	Fire Protection	
Fluid and Gas	Compressed System Air	
Mechanical	Crane Support Equipment	
Mechanical	Cranes and Hoists	
Mechanical	Elevators	
Safety	Hazard Notification	
Safety	Eye washes/Decontaminate showers	
Safety	Fall Protection	
Structure	Basic Structure	
Structure	Special Purpose Doors	
Water	Potable Water	
Water	Sanitary Sewer	

Figure A-3-1 Delta Critical Facilities Database (continued)		
Hangar M – Facility 1731		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	Narrow band Transmission	
Communication	Public Address System	
Communication	TOPS/Digital Voice	
Electrical	Grounding	
Electrical	Low Voltage	Interface: Load side of transformers HMI3 and HMI2.
Environmental	Fire Protection	
Environmental	HVAC	Battery Lab: 10 ton & 2-1 ton; Battery Lab & Coolers, and 2nd Stage & Fairing Storage:7.5 ton & 10 ton
Fluid and Gas	Compressed System Air	
Mechanical	Crane Support Equipment	
Mechanical	Cranes and Hoists	
Safety	Fall Protection	
Safety	Eye washes/Decontaminate showers	
Safety	Hazard Notification	
Structure	Special Purpose Doors	
Structure	Basic Structure	
Water	Potable Water	
Water	Sanitary Sewer	
High Pressure Test Facility – Facility 56618		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Communication	TOPS/Digital Voice	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	Fire Protection	
Environmental	HVAC	4 ton
Safety	Eye washes/Decontaminate showers	
Safety	Hazard Notification	
Structure	Basic Structure	
Structure	Special Purpose Doors	
Water	Sanitary Sewer	
Water	Potable Water	
Lab Building – Facility 56632		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	Fire Protection	
Environmental	HVAC	3 systems - 3 ton, 3 ton, 4 ton
Figure A-3-1 Delta Critical Facilities Database (continued)		
Lab Building – Facility 56632 (concluded)		

System	Sub-system	Notes
Environmental	Cleanroom	Cleaning lab and hydraulics room
Safety	Eye washes/Decontaminate showers	
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	
Pump Station #1 – Facility 40906		
System	**Sub-system**	**Notes**
Communication	Public Address System	
Communication	Telephone/LAN wiring	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	HVAC	
Environmental	Fire Protection	
Fluid and Gas	Compressed System Air	
Fluid and Gas	Fuel	Diesel
Safety	Eye washes/Decontaminate showers	
Structure	Basic Structure	Includes all storage tanks
Water	Potable Water	
Water	Pump Station Equipment	
Water	Sanitary Sewer	
Shipping & Receiving Bldg – Facility 56620		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Electrical	Grounding	
Electrical	Low Voltage	All electrical power for area 55 feeds through this facility. Interface point for high to low power is load side of transformer A55T1
Environmental	Fire Protection	
Environmental	HVAC	For storage of flight hardware - 1 ton unit
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	
Solid Motor Assembly Bldg – Facility 50803		
System	**Sub-system**	**Notes**
Communication	Public Address System	
Communication	Telephone/LAN wiring	
Electrical	Grounding	
Electrical	Low Voltage	Interface: Load side of transformer A57I2
Environmental	Fire Protection	
Environmental	HVAC	
Fluid and Gas	Compressed System Air	
Mechanical	Crane Support Equipment	

Figure A-3-1 Delta Critical Facilities Database (concluded)		
Solid Motor Assembly Bldg – Facility 50803		
System	**Sub-system**	**Notes**
Mechanical	Cranes and Hoists	
Safety	Hazard Notification	
Safety	Eye washes/Decontaminate showers	
Structure	Special Purpose Doors	
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	
Solid Motor Storage Bldg – Facility 50801		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	HVAC	
Environmental	Fire Protection	
Safety	Eye washes/Decontaminate showers	
Structure	Basic Structure	
Structure	Special Purpose Doors	
Water	Sanitary Sewer	
Water	Potable Water	
Solid Motor Storage Facility – Facility 35420		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	HVAC	
Environmental	Fire Protection	
Structure	Special Purpose Flooring	Special epoxy flooring for air pallet.
Structure	Basic Structure	
Structure	Special Purpose Doors	
Storage Facility – Facility 56629		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Electrical	Grounding	
Electrical	Low Voltage	Interface is load side of 480 volt transformer
Environmental	HVAC	2 ton
Environmental	Fire Protection	
Structure	Special Purpose Doors	
Structure	Basic Structure	

Appendix A-4 – Atlas Service Systems

1.0 Purpose and Scope

This appendix identifies the critical facilities, and some of the systems and equipment in those facilities, supporting Atlas launch vehicle service systems at CCAS.

2.0 Responsibilities

Atlas Service Systems are composed of, but not limited to, the following components in Figure A-4-1, Critical Facilities Database, shown on pages A-22 through A-23. It identifies the systems and equipment in each of the critical Atlas facilities which the LO&SC shall operate and maintain.

3.0 Facilities

Atlas service facilities listed below require Facility Management. Facilities include, but are not limited to:

3.1 Atlas Blockhouse area *
3.2 Space Launch Complex 36A
3.3 Hangar K area
3.4 Hangar J area
3.5 Atlas Administrative Buildings, Facilities 5500AY, 5505, 5500AV
3.6 Pump Station #4 area

*Blast door not a requirement for Option Year 2 (FY 00)

Figure A-4-1 Atlas Critical Facilities Database		
Blockhouse – Facility 5501*		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	RF Transmission	RF for hand radios
Communication	Narrow band Transmission	All equipment associated with sequencer
Communication	Antennas	Antenna supports sequencer
Communication	TOPS/Digital Voice	
Communication	Public Address System	
Environmental	Fire Protection	
Environmental	HVAC	8 ton and 30 ton unit
Equipment	Facility Control Monitoring Systems	
Mechanical	Elevators	Material Lift
Mechanical	Misc. Support Equipment	Bunker Periscopes
Safety	Eye washes /Decontaminate showers	
Safety	Hazard Notification	Evacuation Horn
Structure	Special Purpose Doors	Blast door
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	
CX-36A – Facility 5500		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	Wide band Transmission	
Communication	Narrow band Transmission	
Communication	TOPS/Digital Voice	
Communication	Public Address System	
Environmental	Propellant Vapor Detection	
Environmental	HVAC	All HVAC except ECS; include ramp pressure blower, instrumentation cubicle, explosion proof units
Environmental	Fire Protection	
Environmental	Oxygen Hazard Monitoring	Units on service tower
Equipment	Online Lightning Monitoring System	
Equipment	Facility Control Monitoring Systems	
Mechanical	Elevators	2 elevators
Safety	Eye washes/Decontaminate Showers	
Structure	Basic Structure	Identified critical structures: MST – FACILITY 5553, UT – FACILITY 5500, LSB – FACILITY 5510

Figure A-4-1 Atlas Critical Facilities Database (concluded)		
CX-36A – Facility 5500 (concluded)		
System	**Sub-system**	**Notes**
Structure	Camera Towers	
Water	Potable Water	
Water	Sanitary Sewer	
Hangar J – Facility 1721		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	TOPS/Digital Voice	
Communication	Public Address System	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	HVAC	
Environmental	Fire Protection	
Mechanical	Crane Support Equipment	
Mechanical	Cranes and Hoists	
Structure	Special Purpose Doors	Hangar Doors
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	
Pump Station #4 – Facility 1660		
System	**Sub-system**	**Notes**
Communication	Public Address System	
Communication	Telephone/LAN wiring	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	HVAC	
Environmental	Fire Protection	
Fluid and Gas	Fuel	Diesel
Fluid and Gas	Compressed System Air	
Safety	Eye washes /Decontaminate showers	
Structure	Basic Structure	Includes all storage tanks
Water	Potable Water	
Water	Pump Station Equipment	
Water	Sanitary Sewer	

Appendix A-5 – Titan Service Systems

1.0 Purpose and Scope

This appendix identifies the critical facilities, and some of the systems and equipment in those facilities, supporting Titan launch vehicle service systems at CCAS.

2.0 Responsibilities

Titan Service Systems are composed of, but not limited to, the following components in Figure A-5-1, Critical Facilities Database, shown on pages A-25 through A-32. It identifies the systems and equipment in each of the critical Titan facilities which the LO&SC shall operate and maintain.

3.0 Facilities

Titan service facilities listed below require Facility Management. The Titan facilities include, but are not limited to:

3.1 Space Launch Complex 40
3.2 Space Launch Complex 41
3.3 Solid Motor Assembly and Readiness Facility (SMARF) area
3.4 Solid Motor Assembly Building (SMAB) (East & High Bays) area
3.5 Vertical Integration Building area
3.6 Payload Fairing Cleaning Building
3.7 Launch Operations Control Center area
3.8 Hangar AM area
3.9 Hangar E, Facility 1612
3.10 Pump Station #7 area
3.11 ITL Warehouse area
3.12 Missile Inert Storage (MIS) area
3.13 Receipt Inspection Shop (RIS) area
3.14 Segment Ready Storage (SRS) Building area
3.15 Titan Railroad System (including locomotives effective 1 Oct 98)

Figure A-5-1 Titan Critical Facilities Database		
CX-40 – Facility 47100		
System	**Sub-system**	**Notes**
Communication	TOPS/Digital Voice	
Communication	RF Transmission	
Communication	Narrow band Transmission	
Communication	Public Address System	
Communication	Telephone/LAN wiring	
Communication	CCTV	
Communication	Wide band Transmission	
Electrical	Grounding	Including Lightning Mitigation System, facility # 47141
Electrical	Low Voltage	Upstream interface is 480V step down transformer input, including Dranetz. Includes power cables running to camera towers.
Environmental	Cleanroom	Universal Environmental Shelter, Payload fairing airlock, equipment airlocks, change rooms. CX-40 cleanroom transfers to LO&SC responsibility on 1 October 1998.
Environmental	HVAC	To include 3 fan houses
Environmental	Fire Protection	Located in the Security Entry Control Facility: # 47127
Environmental	Oxygen Hazard Monitoring	
Environmental	Propellant Vapor Detection	
Equipment	Online Lightning Monitoring System	
Equipment	Security Alarm System	
Equipment	Facility Control Monitoring Systems	
Fluid and Gas	Gaseous Helium System	
Fluid and Gas	Breathing Air	Downstream from tube bank
Fluid and Gas	Compressed System Air	
Fluid and Gas	Liquid Helium	
Fluid and Gas	Liquid Nitrogen System	
Fluid and Gas	Gaseous Nitrogen	Downstream of Grayloc Flange on NASA feed line
Mechanical	Misc. Support Equipment	lifts, etc.
Mechanical	Crane Support Equipment	
Mechanical	Cranes and Hoists	
Mechanical	MST Traction Drive	
Mechanical	Elevators	3 elevators: 2 passenger and 1 freight
Mechanical	Access Platforms	
Safety	Hazard Notification	
Safety	Eye washes/Decontaminate showers	On/Off water interface valve
Safety	Fall Protection	
Structure	Special Purpose Doors	
Structure	Basic Structure	
Structure	Camera Towers	

Figure A-5-1 Titan Critical Facilities Database (continued)		
CX-40 – Facility 47100 (concluded)		
System	**Sub-system**	**Notes**
Water	Deluge/Overpressure suppression	All water systems including and downstream of 36" butterfly valves in valve pit
Water	Potable Water	All water systems including and downstream of 36" butterfly valves in valve pit
Water	Sanitary Sewer	
Water	Containment	
CX-41 – Facility 29100		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Communication	TOPS/Digital Voice	
Communication	CCTV	
Communication	Narrow band Transmission	
Communication	RF Transmission	
Communication	Wide band Transmission	
Electrical	Low Voltage	Includes power cables running to camera towers.
Electrical	Grounding	Including Lightning Mitigation System, facility # 29110
Environmental	HVAC	To include North & South fan houses: Bldg. #'s 29135, 29136
Environmental	Propellant Vapor Detection	
Environmental	Oxygen Hazard Monitoring	
Environmental	Fire Protection	Located in the Security Entry Control Bldg.: facility # 29126; Interface point: MXL FireTronics Panel
Environmental	Cleanroom	UES, equipment airlocks, change rooms. CX-41 cleanroom transfers to LO&SC responsibility on 1 October 1998
Equipment	Security Alarm System	
Fluid and Gas	Gaseous Nitrogen	Downstream of Grayloc Flange on NASA feed line
Fluid and Gas	Gaseous Helium System	
Fluid and Gas	Liquid Helium	Liquid He dewar and fill panel: facility # 29103
Fluid and Gas	Breathing Air	Interface at tube bank
Fluid and Gas	Liquid Nitrogen System	
Fluid and Gas	Compressed System Air	
Mechanical	Misc. Support Equipment	Lifts, etc.
Mechanical	Access Platforms	
Mechanical	Elevators	3 elevators: 2 personnel and 1 freight
Mechanical	MST Traction Drive	
Mechanical	Crane Support Equipment	
Mechanical	Cranes and Hoists	
Safety	Hazard Notification	
Safety	Eye washes/ Decontaminate showers	
Safety	Fall Protection	
Structure	Camera Towers	
Structure	Special Purpose Doors	UES doors, blast doors, etc
Structure	Basic Structure	

Figure A-5-1 Titan Critical Facilities Database (continued)		
CX-41 – Facility 29100 (concluded)		
System	**Sub-system**	**Notes**
Water	Deluge/Overpressure suppression	All water systems including and downstream of 36" butterfly valves in valve pit
Water	Potable Water	All water systems including and downstream of 36" butterfly valves in valve pit
Water	Containment	
Water	Sanitary Sewer	
Hangar AM – Facility 60550		
System	**Sub-system**	**Notes**
Communication	CCTV	
Communication	Wide band Transmission	
Communication	Telephone/LAN wiring	
Communication	TOPS/Digital Voice	
Communication	Narrow band Transmission	
Communication	Public Address System	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	Cleanroom	Class 400,000
Environmental	HVAC	
Environmental	Fire Protection	
Fluid and Gas	Compressed System Air	
Mechanical	Cranes and Hoists	
Mechanical	Crane Support Equipment	
Safety	Fall Protection	
Structure	Basic Structure	
Structure	Special Purpose Doors	Vertical lift door, airlock door, roll-up doors
Water	Potable Water	
Water	Sanitary Sewer	
Hangar E – Facility 1612		
System	**Sub-system**	**Notes**
Communication	Public Address System	
Communication	Wide band Transmission	
Communication	Narrow band Transmission	
Communication	Telephone/LAN wiring	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	Cleanroom	
Environmental	Fire Protection	
Environmental	HVAC	Hangar HVAC and Trane HVAC for Battery Lab
Mechanical	Cranes and Hoists	
Mechanical	Crane Support Equipment	
Safety	Fall Protection	

Figure A-5-1 Titan Critical Facilities Database (continued)		
Hangar E – Facility 1612 (concluded)		
System	**Sub-system**	**Notes**
Safety	Eye washes/Decontaminate showers	
Structure	Basic Structure	
Structure	Special Purpose Doors	Hangar door
Water	Potable Water	
Water	Sanitary Sewer	
Launch Operations Control Center – Facility 27200		
System	**Sub-system**	**Notes**
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Communication	TOPS/Digital Voice	
Communication	Wide band Transmission	
Communication	Narrow band Transmission	
Communication	CCTV	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	Fire Protection	
Environmental	HVAC	
Equipment	Facility Control Monitoring Systems	
Mechanical	Elevators	
Safety	Eye washes /Decontaminate showers	
Structure	Basic Structure	
Structure	Special Purpose Flooring	
Structure	Special Purpose Doors	
Water	Sanitary Sewer	
Water	Potable Water	
Payload Fairing Cleaning Building – Facility 70503		
System	**Sub-system**	**Notes**
Communication	Public Address System	
Communication	Narrow band Transmission	
Communication	Telephone/LAN wiring	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	HVAC	
Environmental	Cleanroom	
Environmental	Fire Protection	
Fluid and Gas	Gaseous CO2 System	Supply and maintain CO2 storage and dry ice generation equipment supplying robotic PLF cleaning
Fluid and Gas	Compressed System Air	

Figure A-5-1 Titan Critical Facilities Database (continued)		
Payload Fairing Cleaning Building – Facility 70503 (concluded)		
System	**Sub-system**	**Notes**
Mechanical	Misc. Support Equipment	Equipment used in cleanrooms except robot
Mechanical	Cranes and Hoists	
Mechanical	Crane Support Equipment	
Safety	Eye washes /Decontaminate showers	
Safety	Fall Protection	
Structure	Special Purpose Flooring	
Structure	Basic Structure	
Structure	Special Purpose Doors	
Water	Potable Water	
Water	Sanitary Sewer	
Pump Station #7 – Facility 29150		
System	**Sub-system**	**Notes**
Communication	Narrow band Transmission	
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	HVAC	
Environmental	Fire Protection	
Fluid and Gas	Compressed System Air	
Fluid and Gas	Fuel	Diesel
Safety	Eye washes /Decontaminate showers	
Structure	Basic Structure	
Water	Potable Water	
Water	Sanitary Sewer	
Water	Pump Station Equipment	
Railroad/Car System – Facility 20350*		
System	**Sub-system**	**Notes**
Equipment	Railroad (operation not exclusive to LO&SC)	tracks, subsurface below tracks, ties, splices, switches
Equipment	Railroad	Locomotives. Provide organizational level maintenance only.
Equipment	Railroad	Ox ullage railcars – corrosion control only
Equipment	Railroad	Fuel ullage railcars – corrosion control only
Solid Motor Assembly And Readiness Facility – Facility 69800		
System	**Sub-system**	**Notes**
Communication	Wide band Transmission	
Communication	Narrow band Transmission	
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Communication	CCTV	Currently being installed

** Railroad/car System – facility 20350 transfers to LO&SC responsibility on 1 October 1998*

Figure A-5-1 Titan Critical Facilities Database (continued)		
Solid Motor Assembly And Readiness Facility – Facility 69800 (concluded)		
System	**Sub-system**	**Notes**
Communication	TOPS/Digital Voice	
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	Fire Protection	
Environmental	HVAC	
Fluid and Gas	Compressed System Air	Compressed System Air from, and including, the compressor intake to, and including, the facility installed connectors.
Fluid and Gas	Gaseous Nitrogen	Delivered tube bank
Mechanical	Access Platforms	
Mechanical	Cranes and Hoists	
Mechanical	Elevators	
Mechanical	Crane Support Equipment	
Safety	Fall Protection	
Safety	Hazard Notification	
Safety	Eye washes/Decontaminate showers	
Structure	Basic Structure	
Structure	Special Purpose Flooring	Floor under UIS air pallet, but not air pallet itself
Structure	Special Purpose Doors	
Water	Potable Water	
Water	Sanitary Sewer	
Solid Motor Assembly Building – East Bay – Facility 70000		
System	**Sub-system**	**Notes**
Communication	RF Transmission	
Communication	Narrow band Transmission	
Communication	CCTV	
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Communication	Wide band Transmission	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	HVAC	
Environmental	Propellant Vapor Detection	
Environmental	Cleanroom	
Environmental	Fire Protection	Includes water deluge
Fluid and Gas	Gaseous Nitrogen	
Fluid and Gas	Breathing Air	
Fluid and Gas	Compressed System Air	
Mechanical	Access Platforms	
Mechanical	Crane Support Equipment	
Mechanical	Cranes and Hoists	
Safety	Hazard Notification	
Safety	Fall Protection	
Safety	Eye washes/Decontaminate showers	

Figure A-5-1 Titan Critical Facilities Database (continued)		
Solid Motor Assembly Building – East Bay – Facility 70000 (concluded)		
System	**Sub-system**	**Notes**
Structure	Special Purpose Doors	
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	
Solid Motor Assembly Building – High Bay – Facility 70000		
System	**Sub-system**	**Notes**
Communication	Wide band Transmission	
Communication	RF Transmission	
Communication	Narrow band Transmission	
Communication	Telephone/LAN wiring	
Communication	TOPS/Digital Voice	
Communication	Public Address System	
Electrical	Grounding	
Electrical	Low Voltage	
Environmental	Fire Protection	
Environmental	HVAC	
Fluid and Gas	Compressed System Air	
Fluid and Gas	Gaseous Nitrogen	
Mechanical	Crane Support Equipment	
Mechanical	Cranes and Hoists	
Mechanical	Access Platforms	
Mechanical	Elevators	
Safety	Hazard Notification	
Safety	Fall Protection	
Safety	Eye washes/Decontaminate showers	
Structure	Basic Structure	
Structure	Special Purpose Doors	Vertical lift doors
Water	Sanitary Sewer	
Water	Potable Water	
Vertical Integration Building – Facility 70500		
System	**Sub-system**	**Notes**
Communication	TOPS/Digital Voice	
Communication	Wide band Transmission	
Communication	RF Transmission	
Communication	Narrow band Transmission	
Communication	Telephone/LAN wiring	
Communication	Public Address System	
Communication	CCTV	
Communication	Antennas	IUS S-Band Antenna
Electrical	Low Voltage	
Electrical	Grounding	
Environmental	Cleanroom	
Environmental	Fire Protection	
Environmental	HVAC	

Figure A-5-1 Titan Critical Facilities Database (concluded)		
Vertical Integration Building – Facility 70500 (concluded)		
System	**Sub-system**	**Notes**
Equipment	Facility Control Monitoring Systems	
Fluid and Gas	Compressed System Air	
Fluid and Gas	Gaseous Nitrogen	GN2 (for low pressure purging/tests for TOPS)
Fluid and Gas	Gaseous Helium System	
Mechanical	Elevators	
Mechanical	Cranes and Hoists	
Mechanical	Access Platforms	
Mechanical	Crane Support Equipment	
Safety	Fall Protection	
Safety	Eye washes/Decontaminate showers	
Safety	Hazard Notification	
Structure	Special Purpose Doors	Cleanroom doors, roll-up doors
Structure	Basic Structure	
Water	Sanitary Sewer	
Water	Potable Water	

Appendix A-6 – Vandenberg AFB Service Systems (Reserved)

Appendix A-7 – EELV Service Systems (Reserved)

Appendix A-8 – Navy Service Systems (Reserved)

Appendix A-9 – NASA Service Systems (Reserved)

Appendix A-10 – Commerical Service Systems (Reserved)

Appendix A-11 – Other Service Systems (Reserved)

Appendix A-12 – Ordnance Service Systems

1.0 Purpose and Scope

Listed below are facilities used for Ordnance Services operations. Figure A-12-1 identifies the Ordnance Storage and Material Maintenance Facilities.

2.0 Responsibilities

The ordnance services contractor is responsible for the facility management of those facilities in Fuel Storage Area (FSA) 2, FSA 3, and FSA 5.

Figure A-12-1 Ordnance Storage And Material Maintenance Operations Facilities

Area	Bldg	Sqft	CLS A XPL Wt	IDS	O/Hcrane	CLIM CTRL	Type	Identity
FSA2	-----	N/A	N/A				ADMIN	GUARD
FSA2	72650	2960	150000			Env. Ctrl	STORAGE	MM1
FSA2	72665	1450	150000			Env. Ctrl	STORAGE	MM2
FSA2	72680	1450	150000			Heat Only	STORAGE	MM3
FSA2	72700	304	10000			NONE	STORAGE	MAG A
FSA2	72701	1040	20000			NONE	STORAGE	MAG B
FSA2	72702	1560	150000			NONE	STORAGE	MAG C
FSA2	72703	1560	150000			NONE	STORAGE	MAG D
FSA2	72706	304	10000			NONE	STORAGE	MAG G
FSA2	72707	1040	150000			Env Ctrl	STORAGE	MAG H
FSA2	72708	1560	150000			Env Ctrl	STORAGE	MAG I
FSA2	72709	1560	150000			NONE	STORAGE	MAG J
FSA2	77200	1560	150000		1	Heat Only	STORAGE	MAG L
FSA2	77350	N/A	2 bays; 50lbs/bay			Env Ctrl	MAINT	EMT
FSA2	72810	N/A	N/A			NONE	ADMIN	RAMP
FSA2	72905	N/A	N/A			Env Ctrl	ADMIN	OFFICE
FSA2	80505	2200	45000		3	Env Ctrl	MAINT	MRTB-1
FSA3	1240	304	10000	x		NONE	STORAGE	MAG 03
FSA3	1241	1040	100000	x		Env Ctrl	STORAGE	MAG 04
FSA3	1242	304	1000	x		NONE	STORAGE	MAG 01
FSA3	1243	1040	20000	x		NONE	STORAGE	MAG 02
FSA3	1244	1560	100000	x		NONE	STORAGE	MAG 07
FSA3	1245	1560	100000	x		NONE	STORAGE	MAG 11
FSA3	1246	1040	100000	x		NONE	STORAGE	MAG 08
FSA3	1247	1040	100000	x		Env Ctrl	STORAGE	MAG 10
FSA5							ADMIN	GATE
FSA5	61820	3000	100000			NONE	STORAGE	MSF
FSA5	61830	3000	100000			Env Ctrl	STORAGE	GPS
FSA5	61875	1600	9500			NONE	STORAGE	NOTU
FSA5	61900	4416	100000			Env Ctrl	STORAGE	STSPM
FSA5	67210	4074	40000			Env Ctrl	STORAGE	OFFICE
FSA5	67500	1189	50000		1	Env Ctrl	MAINT	MRTB-II
FSA5	67400	6000	50000		1	Env Ctrl	MAINT	HERF
HGR O	01366	4800	40000			NONE	STORAGE	HGR O
KSC	K7-255	2500	20000		1	NONE	STORAGE	1
KSC	K7-306	2500	5000		1	NONE	STORAGE	2
KSC	K7-356	2000	10000		1	NONE	STORAGE	3
KSC	K7-405	80	1000			NONE	STORAGE	4
KSC	K7-406	80	1000			NONE	STORAGE	5
KSC	K7-407	240	2000			NONE	STORAGE	6
KSC	K7-506	2000	N/A		1	Env Ctrl	INERT MAT STG	R&I
KSC	K7-558		N/A			NONE	ADMIN	STORAGE/ADMIN
PAFB	1425	1025	20000 (1.3)	x		NONE	STORAGE	
PAFB	1432	1025	20000 (1.3)			NONE	STORAGE	
PAFB	1433	800	1200 (1.2)			NONE	STORAGE	
PAFB	1435	1025	20000 (1.3)			NONE	STORAGE	
PAFB	1437	1025	20000 (1.2)			NONE	STORAGE	
PAFB	1440	1025	20000 (1.3)			NONE	STORAGE	
PAFB	PB-6	~10' X 12'	N/A			NONE	INERT STORAGE	

Explosive weights are based on Class 1.1 site standards except where noted.

Appendix B – Mission Control Operations

1.0 Purpose and Scope

This Appendix defines Network Validation and Network Operations.

2.0 Responsibilities

2.1 Network Validation – Network Validation tasks are to be performed in each of the facilities as listed in Figure B-1. Network Validation functions consist, as a minimum, of:

2.1.1 Conducting discrete voice and data instrument/equipment testing and validations.

2.1.2 Conducting discrete voice and data circuit validations.

2.1.3 Reporting and tracking to resolution any circuit problems with the range contractor.

2.1.4 Reporting and conducting, where required, any equipment repair actions for data equipment.

2.2 Network Operations – Network Operations tasks are to be performed in each of the facilities as listed in Figure B-1. Network Operations tasks consist, as a minimum, of:

2.2.1 Conducting summary pre-operation data and voice circuit checks.

2.2.2 Providing real-time on-console trouble reporting service to the launch community and coordinating resolution with the range support contractor.

2.2.3 Operating a teletype/fax message center for mission support information.

2.2.4 When requested, providing real-time customer interface between the payload community and the Eastern Range for range support issues (balloon data, range instrumentation support status, network support status, mark events, etc.)

Figure B-1 Network Validation and Network Operations Facilities					
	VIB LOCC 1 and 2	**ROCC**	**Satellite Bldg.**	**Space Launch Complex**	**Hangar AE**
		(note 3)	(note 1)	(note 2)	
Network Validation					
Classified Titan IV	X	X	X	X	
Unclassified Titan IV	X	X	X	X	
Classified Atlas II		X	X	X	X
Unclassified Atlas II			X	X	X
Classified Delta II (RESERVED)		X	X	X	
Unclassified Delta II (RESERVED)		X	X	X	
STS (RESERVED)		X	X		
Other EELV			X	X	
Network Operations					
Classified Titan IV	X	X	X	X	
Unclassified Titan IV	X	X	X	X	
Classified Atlas II		X	X	X	X
Unclassified Atlas II			X	X	X
Classified Delta II (RESERVED)		X	X	X	
Unclassified Delta II (RESERVED)		X	X	X	
STS (RESERVED)		X	X		
Other EELV			X	X	
NOTE 1: For each mission, one of the following: DTC, LSF, or other satellite bldg.					
NOTE 2: For each mission, one of the following: Active Launch Complex.					
NOTE 3: Mission Director room and LDS console in High Bay.					

Appendix C – Reserved

Appendix D – Training Courses

1.0 Purpose and Scope

This appendix lists courses that are currently required for facility access, Air Force Field Operations Controller (AFOC) training, Ordnance training, and operation/certification training. The Cape familiarization course (QG100CAS) shall include an introductory overview to Process Safety Management (PSM), and is required for all personnel at CCAS.

2.0 Responsibilities

The contractor is responsible for providing the training courses listed in Figure D-1. Course descriptions are provided in MDC Y0604S, Revision 1, SPIF Training Plan. Ordnance training information is in the Technical Library. This appendix does not address internal training/skills courses offered internally by the contractor.

Figure D–1 Training Course List

Course Number	Title
FEDHAZ	Hazardous Communications (Air Force)
OC295CAS	Propellant Servicing Facility (PSF) Orientation
OC297CAS	Intercommunications
OC298CAS	SPIF Orientation
OF300CAS	HMS Console Operations
OG310CAS	Draeger Operation
QC312CAS	Cleanroom Operations
QF06ACAS	NPF Orientation
QF06CCAS	DPF Orientation
QF17PCAS	Complex 17 Safety
QF36PCAS	Complex 36 Familiarization
QF40PCAS	Complex 40 Safety Orientation
QF41PCAS	Complex 41 Safety Orientation
QF55PCAS	Area 55 Familiarization
QF57PCAS	Area 57 Familiarization
QG07CKSC	ELSA Training
QG100CAS	CCAS General Safety Orientation
QG105CAS	Personal Protective Equipment
QG106CAS	ITL Orientation
QG117CAS	Complex 17 Safety Orientation (Walkdown)
QG136CAS	Complex 36 Safety Orientation (Walkdown)
QG270KSC	Fall Protection Safety
QS205LSK	How Clean is Clean Enough?
QW29ACAS	SPIF Walkdown
QW29BCAS	PSF Walkdown
QW29CCAS	NPF Walkdown
QW29DCAS	Complex 40 Walkdown
QW29ECAS	Complex 41 Walkdown
QW29JCAS	DPF Walkdown
TG383CAS	Hydra-Set Operations
A-11221101	Overhead Crane Operations Safety
A-11224101	Overhead Crane Safety Refresher
	Ordnance Services Training and Certification
	Ordnance Services Training and Certification Refresher
	User Ordnance Safety and Material Handling Training

Appendix E – Logistics Support Analysis Plan

1.0 Purpose and Scope

This appendix tailors tasking under MIL-STD-1388-1A, Logistics Support Analysis (LSA).

2.0 Responsibilities

Contractor will perform the tasks of Figure E-1 as described in the applicable task description attached to this appendix.

Figure E-1 Tailored Task Listing

Task Number	Title
102	Logistics Support Analysis Plan
103	Program and Design Reviews
203	Comparative Analysis
204	Technological Opportunities
301	Functional Requirements Identification
302	Support System Alternatives
303	Evaluation of Alternatives and Tradeoff Analysis
401	Task Analysis

Appendix E, Task 102

Logistic Support Analysis Plan

102.1 Purpose

To develop a Logistic Support Analysis Plan (LSAP) which identifies and integrates all LSA tasks, identifies management responsibilities and activities, and outlines the approach toward accomplishing analysis tasks. LSA tasks shall be performed for existing spacecraft/launch service systems to the extent possible and for all new equipment systems.

102.2 Task Description

102.2.1 Prepare an LSAP which describes how the LSA program will be conducted to meet program requirements. The LSAP shall include the following elements of information, with the range and depth of information for each element tailored to the acquisition phase.

a. A description of how the LSA program will be conducted to meet the system and logistic requirements defined in the applicable program documents.
b. A description of the management structure and authorities applicable to LSA. This includes the interrelationship between line, service, staff, and policy organizations.
c. Identification of each LSA task by system and facility and how each will be performed.

d. A schedule with estimated start and completion points for each LSA task. Schedule relationships with other program requirements and associated system engineering activities shall be identified.
e. A description of how LSA tasks and data will interface with other spacecraft/launch service systems tasks and data. This description will include consideration of required analysis and data interfaces with the following, as applicable:

   (1) System/Equipment Design

   (2) System/Equipment Reliability

   (3) System/Equipment Maintainability

   (4) Configuration Control/Management

   (5) Packaging, Handling, Storage, and Transportability

   (6) Initial Provisioning

   (7) System/Equipment Testability

   (8) Technical Publications

   (9) Training and Training Equipment

   (10) Facilities

   (11) Support Equipment

   (12) Test and Evaluation

f. Work Breakdown Structure (WBS) identification of items upon which LSA will be performed and documented by spacecraft/launch service system by facility.
g. Complete explanation of the LSA control numbering system to be used.
h. The method by which supportability and supportability related design requirements are disseminated to designers and associated personnel.
i. The method by which supportability and supportability related design requirements are disseminated to subcontractors and the controls levied under such circumstances.
j. Government data furnished to the contractor.
k. Procedures for updating and validating of LSA data to include configuration control procedures for LSA data.
l. The procedure to evaluate the status and control of each task, and identification of the organizational unit with the authority and responsibility for executing each task.
m. The procedures, methods, and controls for identifying and recording design problems or deficiencies affecting supportability, corrective actions required, and the status of actions taken to resolve the problems.
n. Description of the data collection system to be used to document, disseminate, and control LSA and related design data.

o. A description of the Logistics Support Analysis Record (LSAR) Automated Data Processing (ADP) system to be used and identification of the validated status when independently developed LSAR ADP software is utilized.

102.2.2 Update the LSAP as required, based on analysis results, program schedule modifications, and program decisions.

102.3 Task Input

102.3.1 Identification of each LSA task required under this standard and any additional task to be performed as part of the LSA program.

102.3.3 Identification of any specific indoctrination or LSA training to be provided.

102.3.5 Delivery identification of any data item required.

102.3.6 System/equipment requirements and development schedule.

102.4 Task Output

102.4.1 Logistic Support Analysis Plan. (102.2.1)

102.4.2 Logistic Support Analysis Plan updates as applicable. (102.2.2)

Appendix E, Task 103

Program and Design Review

103.1 Purpose

To establish a requirement for the contractor to plan and provide for official review and control of released design information with the LSA program participation in a timely and controlled manner, and to ensure that the LSA program is proceeding so that the supportability and supportability related design requirements will be achieved.

103.2 Task Description

103.2.1 Establish and document design review procedures which provide for official review and control of released design information with LSA program participation in a timely and controlled manner. These procedures shall define accept/reject criteria pertaining to supportability requirements, the method of documenting reviews, the types of design documentation subject to review, and the degree of authority of each reviewing activity.

103.2.2 Formal review and assessment of supportability and supportability related design contract requirements shall be an integral part of each system/equipment design review (e.g., system design review (SDR), preliminary design review (PDR), critical design review (CDR), etc.) specified by the contract. The performing activity shall schedule reviews with subcontractors and suppliers, as appropriate, and inform the requiring authority in advance of each review. Results of each system/equipment design review shall be documented. Design

reviews shall identify and discuss all pertinent aspects of the LSA program. Agendas shall be developed and coordinated to address at least the following topics as they apply to the program phase activity and the review being conducted.

a. LSA conducted by task and WBS element.
b. Supportability assessment of proposed design features including supportability, cost, and readiness drivers and new or critical logistic support resource requirements.
c. Corrective actions considered, proposed, or taken, such as:

    (1) Support alternatives under consideration.

    (2) System/equipment alternatives under consideration.

    (3) Evaluation and tradeoff analysis results.

    (4) Comparative analysis with existing systems and equipment.

    (5) Design or redesign actions proposed or taken.

d. Review of supportability and supportability related design requirements (with review of specifications as developed).
e. Progress toward establishing or achieving supportability goals.
f. LSA documentation required, completed, and scheduled.
g. Design, schedule, or analysis problems affecting supportability.
h. Identification of supportability related design recommendations to include a description of the recommendation; whether or not it has been approved or is pending; rationale for approval (e.g., cost savings, maintenance burden reductions, supply support reductions, reliability improvements, safety, or health hazard reduction, etc.).
i. Other topics and issues as appropriate.

103.2.3 Formal review and assessment of supportability and supportability related design contract requirements shall be an integral part of each system/equipment program review specified by the contract. Program reviews include, but are not limited to, logistics management meetings, reliability program reviews, system safety program reviews, and supply report reviews. The contractor shall schedule program reviews with subcontractors and suppliers, as appropriate, and inform the requiring authority in advance of each review. Results of each system/equipment program review shall be documented. Program reviews shall identify and discuss all pertinent aspects of the LSA program. Agendas shall be developed and coordinated to address at least the topics listed under 103.2.2 as they apply to the program phase activity and the review being conducted.

103.2.4 The LSA program shall be planned and scheduled to permit the contractor and the Government to review program status. The status of the LSA program shall be assessed at LSA reviews specified by the contract. The performing activity shall schedule LSA reviews with subcontractors and suppliers, as appropriate, and inform the Government in advance of each review. Results of each LSA review shall be documented. LSA reviews shall identify and discuss all pertinent aspects of the LSA program to a more detailed level than that covered at design and program reviews. Agendas shall be developed and coordinated to address at least the

topics listed under 103.2.2 as they apply to the program phase activity and the review being conducted.

103.2.5 LSA guidance conferences shall be planned and scheduled to permit the contractor and the Government to formally assess the relationship of the LSA documentation, task milestones, and funding levels contractually required. The performing activity shall schedule a LSA guidance conference with the subcontractors and suppliers, as appropriate, and inform the Government in advance of each conference. Results of each LSA guidance conference shall be documented. Agendas shall be developed and coordinated to address at least the topics listed under 102.2.1 as they apply to the program. Additional functional area guidance conferences shall be held as part of the LSA guidance conference or scheduled to occur after the LSA guidance conference. A requirement for the additional conferences to be held shall be scheduled during the LSA guidance conference or as part of the LSA plan. A list of candidate conferences is as follows:

a. Provisioning Guidance Conference
b. Provisioning Preparedness Review Conference
c. Long Lead Time Item Provisioning Conference
d. Provisioning Conference
e. Interim Support Items Conference
f. General Conference

Refer to MIL-STD-1388-1A for conference definitions.

103.3 Task Input

103.3.1 Identification and location of design, program, and LSA reviews required.

103.3.2 Advance notification requirements to the requiring authority of all scheduled reviews.

103.3.3 Recording procedures for the results of the reviews.

103.3.4 Identification of Government and contractor follow-up methods on review of open items.

103.3.5 Delivery identification of any data item required.

103.4 Task Output

103.4.1 Design review procedures which provide for official review and control of released design information with LSA program participation in a timely and controlled manner. (103.2.1)

103.4.2 Agendas for documented results of each design review to include design recommendations identified in accordance with 103.2.2h. (103.2.2)

103.4.3 Agendas for and documented results of each system/equipment program review. (103.2.3)

103.4.4 Agendas for and documented results of each system/equipment program review. (103.2.4)

103.4.5 Schedules and agendas for, and documented results of, each provisioning related activity or conference . (103.2.5)

Appendix E, Task 203

Comparative Analysis

203.1 Purpose

To select or develop a Baseline Comparison System (BCS) representing characteristics of new systems and equipment for (1) projecting supportability related parameters, making judgments concerning the feasibility of new systems and equipment supportability parameters, and identifying targets for improvement, and (2) determining the supportability, cost, and readiness drivers of new systems and equipment.

203.2 Task Description

203.2.1 Identify existing systems and subsystems (hardware, operational, and support) useful for comparative purposes with new system/equipment alternatives. Different existing systems shall be identified when new system/equipment alternatives vary significantly in design, operation, or support concepts, or where different existing systems are required to adequately compare all parameters of interest.

203.2.2 Select or develop a BCS for use in comparative analyses and identifying supportability, cost, and readiness drivers of each significantly different new system/equipment alternative. A BCS may be developed using a composite of elements from different existing systems when a composite most closely represents the design, operation, and support characteristics of a new system/equipment alternative. Different BCS's or composites may be useful for comparing different parameters of interest. Previously developed BCS's shall be assessed to determine the extent to which they can fill the need for the new system/equipment.

203.2.3 Determine the O&S costs, logistic support resource requirements, reliability and maintainability (R&M) values, and readiness values of the comparative systems identified. Identify these values at the system and subsystem level for each BCS established. Values shall be adjusted to account for differences between the comparative system's use profile and the new system/equipment.

203.2.4 Identify qualitative environmental, health-hazard, safety, and supportability problems on comparative systems which should be prevented on the new system/equipment.

203.2.5 Determine the supportability, cost, and readiness drivers of each comparative system or BCS. These drivers may come from the design, operating, or support characteristics of the comparative systems and represent drivers for the new system/equipment. For example, repair cycle time may be the prime readiness, a particular hardware subsystem may be the prime manpower driver, or energy cost may be the prime cost driver.

203.2.6 Identify and document any supportability, costs, or readiness drivers for the new system/equipment resulting from subsystems or equipment in the new system for which there are no comparable subsystems or equipment in comparative systems.

203.2.7 Update the comparative systems, their associated parameters, and the supportability, cost, and readiness drivers as the new system/equipment alternatives become better defined or as better data is obtained on the comparative systems and subsystems.

203.2.8 Identify and document any risks and assumptions associated with the comparative systems, and their associated parameters and drivers, such as a low degree of similarity between the new system/equipment and existing systems or the lack of accurate data on existing systems.

203.3 Task Input

203.3.1 Information available from the requiring authority relative to current operational systems.

203.3.2 Delivery identification of any data item required.

203.3.3 Level of detail required for comparative system descriptions. (203.2.1, 203.2.2)

203.3.4 Description of new system alternatives under consideration.

203.3.6 Previously developed BCS's which are relevant to the new system/equipment.

203.4 Task Output

203.4.1 Identification of existing systems and subsystems useful for comparative analysis with new system/equipment alternatives. (203.2.1, 203.2.2)

203.4.2 O&S costs, logistic support resource requirements, R&M, and readiness values of the comparative systems and subsystems. (203.2.3)

203.4.3 Identification of qualitative environmental, health hazard, safety, and supportability problems on comparative systems which should be prevented on the new system/equipment. This will include identification of operations and maintenance tasks associated with comparative systems which adversely impact system performance due to equipment design and are to be avoided in the design of the new system. (203.2.4)

203.4.4 Supportability, cost, and readiness drivers of the new system/equipment based on comparative systems and equipment. (203.2.5)

203.4.5 Supportability, cost, and readiness drivers for the new system/equipment resulting from subsystems or equipment in the new system for which there are no comparable subsystems or equipment in comparative systems. (203.2.6)

203.4.6 Updates to comparative system descriptions and their associated parameters. (203.2.7)

203.4.7 Risks and assumptions associated with the use of the comparative systems and subsystems and the parameters established for them. (203.2.8)

Appendix E, Task 204

Technological Opportunities

204.1 Purpose

To identify and evaluate design opportunities for improvement of supportability characteristics and requirements in new system/equipment.

204.2 Task Description

204.2.1 Establish design technology approaches to achieve supportability improvements on new systems and equipment over existing systems and subsystems. These design approaches shall be established through the following:

a. Identifying technological advancements and other design improvements which can be exploited in new system/equipment's development and which have the potential for reducing logistic support resource requirements, reducing costs, reducing environmental impact, improving safety, or enhancing system readiness.
b. Estimating the resultant improvements that would be achieved in the supportability, cost, environmental impact, safety, and readiness values.
c. Identifying design improvements to logistic elements (such as support equipment and training devices) that can be applied during the new system/equipment's development to increase the effectiveness of the support system or enhance readiness.

204.2.2 Update the design objectives as new system/equipment alternatives become better defined.

204.2.3 Identify any risks associated with the design objectives established, any development and evaluation approaches needed to verify the improvement potential, and any cost or schedule impacts to implement the potential improvements.

204.3 Task Input

204.3.1 Delivery identification of any data item required.

204.3.2 Information available from the requiring authority relative to technology evaluations and improvements.

204.3.3 Current reliability, maintainability, and support system design approaches for state-of-the-art systems and equipment.

204.3.4 Supportability, cost, and readiness values and drivers for comparative systems from Task 203.

204.3.5 Qualitative supportability problems on existing systems and equipment from Task 203.

204.4 Task Output

204.4.1 Recommended design specifications to achieve improvements on the new system/equipment. (204.2.1)

204.4.2 Updates to the design objectives established as new system/equipment alternatives become better defined. (204.2.2)

204.4.3 Any additional funding requirements, risk associated with the design objectives established, any development and evaluation approaches needed to verify the improvement potential, and any cost or schedule impacts to implement potential improvements. (204.2.3)

Appendix E, Task 301

Functional Requirements Identification

301.1 Purpose

To identify the operations, maintenance, and support functions that must be performed in the intended environment for spacecraft/launch service system in each facility, and then to identify the human performance requirements for operations, maintenance, and support and to document those requirements in a task inventory.

301.2 Task Description

301.2.1 Identify and document the functions that must be performed for each spacecraft/launch service system to be operated and maintained in its intended operational environment for each design alternative under consideration, for new or replacement system/equipment, and for existing systems. Identify hazards, including hazardous material, hazardous waste, and environmental pollutants associated with those functions identified.

301.2.2 Identify those functional requirements which are unique to each spacecraft/launch service system.

301.2.3 Identify any risks involved in satisfying the functional requirements of each spacecraft/launch service system.

301.2.4 A task inventory shall be prepared for each existing or new spacecraft/launch service system/equipment. This task inventory shall identify all tasks that operators, maintainers, or support personnel must perform with regard to the system/equipment based on the identified functional requirements (i.e., functional analysis). The task inventory shall be organized in terms of a task taxonomy which defines mission, function, job, duty, task, subtask, and task elements, as defined in the glossary. The task inventory shall be composed of task descriptions, each of which consists of:

a. An action verb which identifies what is to be accomplished in the task.
b. An object which identifies what is to be acted upon in the task.

c. Qualifying phrases needed to distinguish the task from related or similar tasks.

Task description shall be clear, concise, relevant, and written in operator or maintainer language. Hazardous materials, generation of waste, release of air and water pollutants, and environmental impacts associated with each task shall be identified. Where the same task appears in the duty of more than one job and is therefore identified as a collective task for training purposes, it will be identified as such within the task inventory. All verbs shall be unambiguously defined within the taxonomy. A list of preferred verbs is provided in MIL-STD-1388-2B. Task descriptions may be supplemented by graphical displays or time line charts. Task descriptions shall be limited to information germane to the task, not the qualifications of personnel involved, necessary tools, or job aids. Operations, preventative maintenance, corrective maintenance, and other support tasks such as preparation for operation, post operation, calibration, and transportation shall be identified by the following methods.

301.2.4.1 The results of failure modes, effects, and criticality analysis (FMECA), or Government approved equivalent analysis, shall be documented and analyzed to identify and document corrective maintenance task requirements. The FMECA or equivalent, shall be documented for each system/equipment and to the indenture level consistent with the design progression.

301.2.4.2 Preventative maintenance task requirements shall be identified by conducting a reliability centered maintenance (RCM) analysis. The RCM analysis shall be based on the FMECA data and documented.

301.2.4.3 Operations, maintenance, and other support tasks shall be identified through analysis of the functional requirements of each system/equipment taking into account mission and conditions under which each spacecraft/launch service system will be operated. The analysis shall examine each system function allocated to personnel and determine what operator or support personnel tasks are involved in the performance of each system function.

301.2.5 Identify all design deficiencies uncovered during the identification of functional requirements or operations and maintenance task requirements.

301.2.6 Update the functional requirements and operations and maintenance task requirements as spacecraft/launch service system operation and maintenance data becomes available or changes.

301.3 Task Input

301.3.1 Delivery identification of any data item required.

301.3.2 Detailed RCM procedures and logic to be used in conducting the RCM analysis. (301.2.4)

301.3.3 Identification of system/equipment hardware and software on which this task will be performed and the indenture levels to which this analysis will be carried.

301.3.4 Identification of the levels of maintenance which will be analyzed during performance of this task to identify functions and tasks.

301.3.5 Any documentation requirements over and above LSAR data such as functional flow diagrams.

301.3.6 Requirements for a FMECA. (301.2.4, 301.2.6)

301.3.7 Description of system/equipment concepts under consideration.

301.3.8 Supportability, cost, and readiness drivers from Task 203. (301.2.2)

301.3.9 FMECA results. (301.2.4, 301.2.6)

301.3.10 Configuration Item requirements.

301.4 Task Output

301.4.1 Documented functional requirements for spacecraft/launch service systems. (301.2.1)

301.4.2 Identification of those functional requirements which are unique to each system/equipment or which are supportability, cost, or readiness drivers. (301.2.2)

301.4.3 Identification of any risks involved in satisfying the functional requirements of the new system/equipment. (301.2.3)

301.4.4 A task inventory documented in the LSAR, identifying task requirements, to include task descriptions, on system hardware and software. (301.2.4)

301.4.5 Document design deficiencies identified as a result of the functional requirements and operations and maintenance task identification process. (301.2.5)

301.4.6 Updates to the identified functional requirements and operations and maintenance task requirements.

Appendix E, Task 302

Support System Alternatives

302.1 Purpose

To establish viable support system alternative for the spacecraft/launch service systems for evaluation, tradeoff analysis, and determination of the best system for development.

302.2 Task Description

302.2.1 Develop and document viable alternative system level support concepts for new and existing spacecraft/launch service systems which satisfy the functional requirements of those systems within the established supportability and supportability related design constraints. Each alternative support concept shall be developed to a level of detail commensurate with requirements, and shall address all elements of ILS. Support concept alternatives shall be prepared to equivalent levels of detail to the degree possible for use in the evaluation and tradeoff of the alternatives. The range of support alternatives considered shall not be restricted to existing standard support concepts but shall include identification of innovative concepts which could improve system readiness, optimize manpower and personnel requirements, or reduce

O&S costs. Contractor logistic support shall be considered in formulating alternative support concepts.

302.2.5 Identify risk associated with each support system alternative formulated.

302.3 Task Input

302.3.1 Delivery identification of any data item required.

302.3.2 Functional requirements for system/equipment alternatives under consideration from Task 301.

302.4 Task Output

302.4.1 Alternative system level support concepts. (302.2.1)

302.4.5 Risks associated with each support system alternative formulated. (302.2.5)

Appendix E, Task 303

Evaluation of Alternatives and Tradeoff Analysis

303.1 Purpose

To determine the preferred support system alternative(s) for each system/equipment alternative and to participate in alternative system tradeoffs to determine the best approach (support, design, and operation) which satisfies the need with the best balance between cost, schedule, performance, readiness, and supportability.

303.2 Task Description

303.2.1 For each evaluation and tradeoff to be conducted under this task:

a. Identify the qualitative and quantitative criteria which will be used to determine the best results. These criteria shall be related to the supportability, cost, environmental impact, and readiness requirements for the system/equipment.
b. Select or construct analytical relationships or models between supportability, design, and operational parameters and those parameters identified for the evaluation criteria. In many cases, the same model or relationship may be appropriate to perform a number of evaluations and tradeoffs. Parametric and cost estimating relationships (PER/CER) may be appropriate for use in formulating analytical relationships.
c. Conduct the tradeoff for evaluation using the established relationships and models and select the best alternative(s) based upon the established criteria.
d. Conduct appropriate sensitivity analyses on those variables which have a high degree of risk involved or which drive supportability, cost, or readiness for the new system.
e. Document the evaluation and tradeoff results including any risks and assumptions involved.

303.2.2 Conduct evaluations and tradeoffs between the support system alternatives identified for each system (Task 302). For the selected support system alternative, identify and document any

new or critical logistic support resource requirements. Any restructured personnel job classification shall be identified as a new resource.

303.2.3 Conduct evaluations and tradeoffs between design, operations, and support concepts under consideration.

303.2.5 Estimate and evaluate the manpower and personnel implications of alternative system/equipment concepts in terms of total numbers of personnel required, job classifications, skill levels, and experience required. This analysis shall include organizational overhead requirements, error rates, and training requirements.

303.2.6 Conduct evaluations and tradeoffs between design, operations, training, and personnel job design to determine the optimum solution for attaining and maintaining the required proficiency of operating and support personnel. Training evaluations and trades shall be conducted and shall consider shifting of job duties between job classifications, alternative technical publications concepts, and alternative mixes of formal training, on-the-job training, and unit training.

303.3 Task Inputs

303.3.1 Delivery identification of any data item required.

303.3.2 Method of review and approval of identified evaluations and tradeoffs to be performed, evaluation criteria, analytical relationships and models to be used and analysis results.

303.3.3 Specific evaluations/tradeoffs analyses to be performed.

303.3.4 Specific analytical relationships or models to be used.

303.3.5 Any limits (numbers or skills) to operator or support personnel for the new system/equipment.

303.3.6 Manpower and personnel costs for use in appropriate tradeoffs and evaluations which include costs related to recruitment, training, retention, development, and washout rates. (303.2.2, 303.2.5, 303.2.6)

303.3.7 Support alternatives for the new system/equipment from Task 302.

303.3.8 Description of system alternatives under consideration.

303.3.11 Job and task inventory for applicable personnel job classifications. (303.2.2, 303.2.5, 303.2.6)

303.4 Task Output

303.4.1 For each evaluation and tradeoff performed under this task:

a. Identification of the evaluation criteria, analytical relationships and models used, selected alternative(s), evaluation and tradeoff results, and any risks involved.
b. Tradeoff and evaluation updates, as applicable.

303.4.2 Recommend support system alternative for each system based on cost, schedule, performance, readiness, and supportability factors and identification of new or critical logistic support resource requirements. (303.2.2)

303.4.5 Estimates of total manpower and personnel requirements for alternative system/equipment concepts. (303.2.5)

303.4.6 Optimum training and personnel job design for attaining and maintaining the required proficiency of operating and support personnel. (303.2.6)

Appendix E, Task 401

Task Analysis

401.1 Purpose

To analyze required operations and maintenance tasks for each existing and new Spacecraft/Launch Service System.

a. Identify logistics support resource requirements for each task.
b. Identify new or critical logistic support resource requirements.
c. Identify transportability requirements.
d. Identify support requirements which exceed established goals, thresholds, or constraints.
e. Provide data to support participation in the development of design alternatives to reduce O&S costs, optimize logistic support resource requirements, or enhance readiness.
f. Provide source data for preparation of required documents (technical procedures, training programs, manpower and personnel lists, etc.).

401.2 Task Description

401.2.1 Conduct a detailed analysis of each operation, maintenance and support task inventory (Task 301) and determine the following:

a. Logistic support resources required (considering all ILS elements) to perform the task.
b. Task frequency, task interval, elapsed time, and man-hours in the system/equipment's intended operational environment.
c. Maintenance level based on the established support plan (Task 303).
d. Environmental impact of the tasks including use of hazardous materials, generation of hazardous materials, generation of hazardous waste, and release of air and water pollutants.

401.2.2 Document the results of Task 401.2.1 in the LSAR.

401.2.3 Identify new and critical logistic support resources required to perform each task, and hazardous materials, hazardous waste, and environmental impact requirements associated with these resources. New resources are those required to operate or maintain new systems and equipment. These can include support and test equipment, facilities, new or special transportation systems, new computer resources, and new repair, test, or inspection techniques or procedures to support new design plans or technology. Critical resources are those which are not new but require special management attention due to schedule constraints, cost implications, or known scarcities. Unless otherwise required, document new and modified logistic support resources in the LSAR, or equivalent documentation approved by the requiring authority, to provide a description and justification for the resource requirement.

401.2.4 Based upon the identified task procedures and personnel assignments, identify training requirements and identify the best mode of training (formal classroom, on-the-job, or both) and the rationale for selection. Document the results in the LSAR.

401.2.5 Analyze the total logistic support resource requirements for each task. Identify tasks which can be optimized or simplified to reduce costs, optimize logistic support resource requirements, reduce environmental impact including use of hazardous materials, generation of hazardous waste, release of air and water pollutants, and environmental impact, or enhance readiness. Develop alternate approaches to optimize and simplify tasks or to bring task requirements within acceptable levels.

401.2.6 Based upon the identified new or critical logistic support resources, determine what management actions can be taken to minimize the risks associated with each new or critical resource. These actions could include development of detailed tracking procedures, or schedule and budget modifications.

401.3 Task Input

401.3.1 Identification of system/equipment hardware and software with which this analysis will be performed.

401.3.2 Identification if indenture levels to which this analysis will be carried.

401.3.3 Identification of the Levels of maintenance which will be documented during performance of this task.

401.3.4 Known or projected logistic support resource shortages.

401.3.5 Schedule and budget ceilings and targets.

401.3.6 Any supplemental documentation requirements over and above the LSAR data records. (e.g., transportability clearance diagrams and time lines)

401.3.7 Delivery identification of any data item required.

401.3.8 Information available from the requiring authority relative to:

a. Existing and planned personnel skills, capabilities, and programs of instruction.
b. List of standard support and test equipment.
c. Facilities available.
d. Training devices available.
e. Existing transportation systems and capabilities.

401.3.9 Description of personnel capabilities (target audience) intended to operate and maintain the new system/equipment at each level of maintenance.

401.3.10 Any limits (number or skills) to operators or support personnel for new system/equipment.

401.3.11 Annual operating basis for task frequencies.

401.3.12 Operations, maintenance, and support task requirements from Task 301.

401.3.14 Support plan for the system/equipment from Task 303.

401.4 Task Output

401.4.1 Completed LSAR data on system/equipment hardware and software and to the indenture level specified by the requiring authority, or equivalent format approved by the requiring authority.

401.4.2 Identification of new or critical logistic support resources required to operate, maintain, and support new systems. (401.2.3)

401.4.3 Alternate approaches where the opportunity exists to reduce O&S costs, optimize logistic support resource requirements, or enhance readiness. (401.2.5)

401.4.5 Identification of management actions to minimize the risks associated with each new or critical logistic support resource requirement. (401.2.6)

Appendix F – Configuration Management

1.0 Purpose and Scope

This appendix tailors tasking under MIL-STD-973, Configuration Management.

2.0 Responsibilities

2.1 The contractor will perform the functions described in MIL-STD-973 except for the following paragraphs: 4.7; 5.3.3.3; 5.3.6.1; 5.3.6.5; 5.4.2.3.6.2; 5.4.8; 5.5.8; and 5.6.

2.2. The contractor will perform the Configuration Status Accounting tasks of Figure F-1 as described in MIL-STD-973, Appendix H.

Figure F-1 Configuration Status Accounting Tasks

Task Number	Title
101	Specification Revision Level
102	Specification Revision History
103	Drawing Revision Level
104	Drawing Revision History
105	Software Version Level
106	Software Version History
107	Indentured Listing
201	Changes In Process
202	Change History
301	Approved Changes
401	Approved Change Implement
501	As-Built Record
502	Maintenance History

Appendix G – System Safety Program Requirements

1.0 Purpose and Scope

This appendix tailors tasking under MIL-STD-882C, NOTICE 1, System Safety Program Requirements.

2.0 Responsibilities

2.1 The contractor shall perform the MIL-STD-882C(1) tasks identified in Figure G-1 for all existing systems, operations, and maintenance.

2.2 The contractor shall perform the MIL-STD-882C(1) tasks identified in Figure G-2 for all new or modified systems, operations, and maintenance.

2.3 Minimum qualifications for the Key System Safety Position shall be those for Moderate Program Complexity as specified in Table 3, Appendix A of MIL-STD-882C, NOTICE 1.

Figure G-1 Tailored Task Listing for Existing Systems	
101	System Safety Program
102	System Safety Program Plan
106	Hazard Tracking and Risk Resolution
206	Operating & Support Hazard Analysis
301	Safety Assessment

Figure G-2 Additional Task Listing for New/Modified Systems	
202	Preliminary Hazard Analysis
204	Subsystem Hazard Analysis
302	Test and Evaluation Safety
303	Safety Review of ECPs, Specification Change Notices, Software Problem Reports, and Requests for Deviation/Waiver
402	Safety Compliance Assessment

Appendix H – Work Breakdown Structure

1.0 Purpose and Scope

Figure H-1 provides a top level Work Breakdown Structure (WBS) for this SOW. It will extend down to the Specific Equipment level, which is one level below the Subsystem level, when the Specific Equipment is identified.

2.0 WBS Description and Features

The WBS is structured in accordance with the principles of MIL-STD-881, Work Breakdown Structures for Defense Systems and ADPL 004: Contract Work Breakdown Structure. The WBS elements correlate to the SOW requirements, so that each requirement in the SOW has a corresponding WBS element against which work can be planned, charged, tracked, and reported. Figure H-2 illustrates this correlation. The WBS is designed and formatted to allow for systems specific work in Systems Management and Operation and Maintenance to be planned, charged, tracked, and reported by: (1) SOW functional area; (2) Facility; (3) Subsystem; and (4) Specific Equipment. In this approach, Specific Equipment is the next level below the subsystem and is the Lowest Repairable Unit (LRU) level. An example is an Air Handling Unit (AHU) for an HVAC system. The facility numbering convention is shown in Figure H-3 and the Subsystem convention in Figure H-4. The first four pages of the expanded WBS are provided as an example in Figure H-5. This structure provides the flexibility to collect and report costs in a number of different forms, depending on the management objectives. For example, total Launch Vehicle costs can be reported by summing all of the WBS elements for the applicable facilities: Spacecraft is 1 - 21; Delta is 22 - 48; Atlas is 49 - 58; and Titan is 59 - 84. These costs can be further shredded out by subsystem, by specific equipment, and by SOW functional area.

Figure H-1 Top Level Work Breakdown Structure (WBS)

0.0 Launch Operations & Support Contract
1.0 Management
- 1.1 Program Management
  - 1.1.1 Contract Administration
  - 1.1.2 Subcontract Management
  - 1.1.3 Property Management
  - 1.1.4 Management Support
    - 1.1.4.1 CWBS
    - 1.1.4.2 Meeting Support
    - 1.1.4.3 Environmental Compliance
    - 1.1.4.4 Performance Metrics
    - 1.1.4.5 Data/ADPL
    - 1.1.4.6 Monthly Status Report
- 1.2 Safety
- 1.3 Security
- 1.4 Planning and Requirements
  - 1.4.1 Preplanning Support
  - 1.4.2 Requirements Development & Planning
  - 1.4.3 Planning & Utilization Schedules
- 1.5 Financial Management
- 1.6 Integrated Resource Management
  - 1.6.1 Spaceport Intranet Information System
    - 1.6.1.1 Operations Support Library
  - 1.6.2 Resource Data Exchange Standard
  - 1.6.3 Maintenance Operations Coordination Center (MOCC) Support

2.0 Systems Management
A = Facility; B = Subsystem; C = Specific Equipment
- 2.1.A.B.C ICDs
- 2.2.A.B.C System Baseline
- 2.3.A.B.C Failure Mode, Effects, and Criticality Analysis (FMECA)
- 2.4.A.B.C Safety Engineering
- 2.5.A.B.C Logistics Support Analysis
- 2.6.A.B.C Operations and Maintenance Procedures
- 2.7.A.B.C Systems Engineering and Configuration Management
- 2.8.A.B.C Modifications and Upgrades
- 2.9.A.B.C Material Review Board

3.0 Systems Operations and Maintenance
- 3.1.A.B.C Operations and Maintenance Control
- 3.2.A.B.C Systems Operations & Maintenance
- 3.3.A.B.C Mission Support
- 3.4.A.B.C Testing, Pre-launch, and Launch Day Support
- 3.5.A.B.C Schedule and Status Reports
- 3.6.A.B.C Maintenance Deferrals
- 3.7.A.B.C Facility Management
- 3.8.A.B.C Disaster Preparedness
- 3.9.A.B.C Corrosion Control

4.0 Logistics
- 4.1 Service System Parts Inventory
- 4.2 Supplies
- 4.3 Packaging/Shipping

5.0 Quality Assurance Program
- 5.1 Quality Program

6.0 Operations Support
- 6.1 Mission Control Operations
  - 6.1.1 Communications Plan
  - 6.1.2 Mission Scripts
  - 6.1.3 Launch Operations Handbook
  - 6.1.4 Network Configuration
  - 6.1.5 Scheduling
  - 6.1.6 Mission Control Operations
- 6.2 Ordnance Services
- 6.3 Operational Training and Badging
- 6.4 Visitor Record Center
- 6.5 Hazardous Commodity Administration

Figure H-2 SOW to WBS Cross Reference Matrix

SOW Paragraph	WBS Element
3.0 Requirements	0. Launch Operations & Support Contract
3.1 Management	1.0 Management
3.1.1 Program Management	1.1 Program Management
3.1.1.1 Contract Administration	1.1.1 Contract Administration
3.1.1.2 Subcontract Management	1.1.2 Subcontract Management
3.1.1.3 Property Management	1.1.3 Property Management
3.1.1.4 Management Support Functions	1.1.4 Management Support 1.1.4.1 CWBS 1.1.4.2 Meeting Support 1.1.4.3 Environmental 1.1.4.4 Performance Metrics 1.1.4.5 Data/APDL 1.1.4.6 Monthly Status Report
3.1.2 Safety	1.2 Safety
3.1.3 Security	1.3 Security
3.1.4 Planning and Requirements	1.4 Planning and Requirements
3.1.4.1 Preplanning Support	1.4.1 Preplanning Support
3.1.4.2 Requirements Development & Planning	1.4.2 Requirements Development & Planning
3.1.4.3 Planning & Utilization	1.4.3 Planning & Utilization
3.1.5 Financial Management	1.5 Financial Management
3.1.6 Integrated Resource Management	1.6 Integrated Resource Management 1.6.1 Spaceport Intranet Information System 1.6.1.1 Operations Support Library 1.6.2 Resource Data Exchange Standard 1.6.3 Maintenance Operations Coordination Center Support
3.2 Systems Management	2.0 Systems Management
3.2.1 Interface Control Documents	2.1.A.B.C ICDs
3.2.2 System Baselines	2.1.A.B.C Baselines
3.2.3 FMECA	2.3.A.B.C FMECA
3.2.4 Safety Engineering	2.4.A.B.C Safety Engineering
3.2.5 LSA	2.5.A.B.C LSA
3.2.6 Operations and Maintenance Procedures	2.6.A.B.C Operations and Maintenance Procedures
3.2.7 Systems Engineering and Configuration Management	2.7.A.B.C Systems Engineering and Configuration Management
3.2.8 Modifications and Upgrades	2.8.A.B.C Modifications and Upgrades
3.2.9 Material Review Board	2.9.A.B.C Material Review Board
3.3 Systems Operations and Maintenance	3.0 Systems Operations and Maintenance
3.3.1 Operations and Maintenance Control	3.1.A.B.C Operations and Maintenance Control
3.3.2 Systems Operations & Maintenance	3.2.A.B.C Systems Operations & Maintenance
3.3.3 Mission Support	3.3.A.B.C Mission Support
3.3.4 Testing, Pre-launch, and Launch Day Support	3.4.A.B.C Testing, Pre-launch, and Launch Day Support
3.3.5 Schedule and Status Reports	3.5.A.B.C Schedule and Status Reports
3.3.6 Maintenance Deferrals	3.6.A.B.C Maintenance Deferrals
3.3.7 Facility Management	3.7.A.B.C Facility Management
3.3.8 Disaster Preparedness	3.8.A.B.C Disaster Preparedness
3.3.9 Communications through 3.3.25 Propellant Vapor Detection (subsystems)	2.1.A.B.C System Baseline and ICDs through 3.8.A.B.C Corrosion Control, depending on the work requirement
3.4 Logistics	4.0 Logistics
3.4.1 Service System Parts Inventory	4.1 Service System Parts Inventory
3.4.2 Supplies	4.2 Supplies
3.4.3 Packaging/Shipping	4.3 Packaging/Shipping
3.5 Quality Assurance Program	5.0 Quality Assurance Program and 5.1 Quality Program
3.6 Operations Support	6.0 Operations Support
3.6.1 Mission Control Operations	6.1 Mission Control Operations
3.6.1.1 Communications Plan	6.1.1 Communications Plan
3.6.1.2 Mission Scripts	6.1.2 Mission Scripts
3.6.1.3 Launch Operations Handbook	6.1.3 Launch Operations Handbook
3.6.1.4 Network Configuration	6.1.4 Network Configuration
3.6.1.5 Scheduling	6.1.5 Scheduling
3.6.1.6 Mission Control Operations	6.1.6 Mission Control Operations
3.6.2 Ordnance Services	6.2 Ordnance Services
3.6.3 Operational Training and Badging	6.3 Operational Training and Badging
3.6.4 Visitor Records Section	6.4 Visitor Records Section
3.6.5 Hazardous Commodity Administration	6.5 Hazardous Commodity Administration

Figure H-3 WBS Facility Numbering

Spacecraft Service Systems

Facilities with Critical Systems	Facility Management Only
1. DSCS Processing Facility – Facility 55820	15. ESA 60 Complex
2. Generator Building – Facility 34716	16. E & L, Facility 1704
3. Interim Hardware Storage Facility – Facility 34715	17. Area 59
4. Launch Support Facility – Facility 1777	18. SAB Compound
5. NAVSTAR Processing Facility – Facility 55810	19. Spacecraft Processing Integration Facility (SPIF) Area
6. NAVSTAR Satellite Storage Facility – Facility 55815	20. Launch Support Facility Area
7. Propellant Conditioning Facility – Facility 55885	21. ITL X-Ray Area
8. Propellant Servicing Facility – Facility 55840	
9. Satellite Assembly Bldg – Facility 49904	
10 Satellite Assembly Bldg Annex – Facility 1613	
11. Space Launch Support Facility – Facility 73700, 73701	
12. Technical Support Mechanical Bldg – Facility 34706	
13. Technical Support Facility – Facility 34705	
14. X-ray – Facility 70659	

Delta Service Systems

Facilities with Critical Systems	Facility Management Only
22. 2nd Stage Checkout Facility – Facility 56636	38. Delta Operation Building (OB) area
23. Booster Processing Facility – Facility 67900	39. Space Launch Complex 17
24. CX-17 A & B – Facility 1270	40. Hangar M area
25. Delta Operations Bldg – Facility 85125	41. Hangar AO area
26. Delta Storage Facility – Facility 60510	42. Flight Hardware Storage Facility, Facility 49934
27. Flight Hardware Storage Facility – Facility 49934	43. Area 55
28. Hangar AO – Facility 60530	44. Area 57
29. Hangar M – Facility 1731	45. Solid Motor Storage Facility, Facility 35420
30. High Pressure Test Facility – Facility 56618	46. Pump Station #1 area
31. Lab Building – Facility 56632	47. Booster Processing Facility area (formerly Delta Spin Test Facility)
32. Pump Station #1 – Facility 40906	48. Complex 18
33. Shipping & Receiving Bldg – Facility 56620	
34. Solid Motor Assembly Bldg – Facility 50803	
35. Solid Motor Storage Bldg – Facility 50801	
36. Solid Motor Storage Facility – Facility 35420	
37. Storage Facility – Facility 56629	

Atlas Service Systems

Facilities with Critical Systems	Facility Management Only
49. Blockhouse – Facility 5501	53. Atlas Blockhouse Area
50. CX-36A – Facility 5500	54. Space Launch Complex 36A
51. Hangar J – Facility 1721	55. Hangar K Area
52. Pump Station #4 – Facility 1660	56. Hangar J Area
	57. Atlas Administrative Buildings, Facilities 5500AY, 5505, 5500AV
	58. Pump Station #4 Area

Titan Service Systems

Facilities with Critical Systems	Facility Management Only
59. CX-40 – Facility 47100	70. Space Launch Complex 40
60. CX-41 – Facility 29100	71. Space Launch Complex 41
61. Hangar AM – Facility 60550	Solid Motor Assembly and Readiness Facility (SMARF) area
62. Hangar E – Facility 1612	
63. Launch Operations Control Center – Facility 27200	73. Solid Motor Assembly Building (SMAB) (East & High Bays) area
64. Payload Fairing Cleaning Building – Facility 70503	74. Vertical Integration Building area
65. Pump Station #7 – Facility 29150	75. Payload Fairing Cleaning Building
66. Railroad/Car System – Facility 20350	76. Launch Operations Control Center area
67. Solid Motor Assembly Building – East Bay – Facility 70000	77. Hangar AM area
68. Solid Motor Assembly Building – High Bay – Facility 70000	78. Hangar E, Facility 1612
69. Vertical Integration Building – Facility 70500	79. Pump Station #7 area
	80. ITL Warehouse area
	81. Missile Inert Storage (MIS) area
	82. Receipt Inspection Shop (RIS) area
	83. Segment Ready Storage (SRS) Building area
	84. Titan Railroad System

Figure H-4 WBS Subsystem Numbering	
1. Antennae	29. Inert Gas Exhausts
2. CCTV	30. Liquid Helium
3. Narrowband Transmission	31. Liquid Hydrogen System
4. Public Address System	32. Liquid Nitrogen System
5. RF Transmission	33. Liquid Oxygen System
6. Telephone/LAN wiring	34. Misc. Support Equipment
7. TOPS/Digital Voice	35. Oxidizer
8. Wide band Transmission	36. Propane
9. Grounding	37. Access Platforms
10. High Voltage	38. Crane Support Equipment
11. Low Voltage	39. Cranes and Hoists
12. Cleanroom	40. Elevators
13. Fire Protection	41. Misc. Support Equipment
14. HVAC	42. MST Traction Drive
15. Oxygen Hazard Monitoring	43. Spin Balance Machine
16. Propellant Vapor Detection	44. Eye washes /Decontaminate showers
17. Cold Soak	45. Fall Protection
18. Facility Control Monitoring Systems	46. Hazard Notification
19. Online Lightning Monitoring System	47. Basic Structure
20. Railroad	48. Camera Towers
21. Security Alarm System	49. Spacecraft leak chamber
22. X-Ray	50. Special Purpose Doors
23. Breathing Air	51. Special Purpose Flooring
24. Compressed System Air	52. Containment
25. Fuel	53. Deluge/Overpressure suppression
26. Gaseous CO2 System	54. Potable Water
27. Gaseous Helium System	55. Pump Station Equipment
28. Gaseous Nitrogen	56. Sanitary Sewer

Figure H-5 Work Breakdown Structure (WBS) Examples	
Number	**WBS Description**
1.0	Management
1.1	Program Management
1.1.1	Contract Administration
1.1.2	Subcontract Management
1.1.3	Property Management
1.1.4	Management Support
1.1.4.1	CWBS
1.1.4.2	Meeting Support
1.1.4.3	Environmental Compliance
1.1.4.4	Performance Metrics
1.1.4.5	Data/ADPL
1.1.4.6	Monthly Status Report
1.2	Safety
1.3	Security
1.4	Planning and Requirements
1.4.1	Preplanning Support
1.4.2	Requirements Development & Planning
1.4.3	Planning & Utilization Schedules
1.5	Financial Management
1.6	Integrated Resource Management
1.6.1	Spaceport Intranet Information System
1.6.1.1	Operations Support Library
1.6.2	Resource Data Exchange Standard
1.6.3	Maintenance Operations Coordination Center (MOCC) Support
2.0	Systems Management
2.1	System Baselines and ICDs
2.1.1	DSCS Processing Facility
2.1.1.2	CCTV
2.1.1.3	Narrow Band Transmission
2.1.1.4	Public Address System
2.1.1.5	RF Transmission
2.1.1.6	Telephone/LAN Wiring
2.1.1.7	TOPS Digital Voice
2.1.1.8	Wide Band Transmission
2.1.1.9	Grounding
2.1.1.11	Low Voltage
2.1.1.12	Clean Room
2.1.1.13	Fire Protection
2.1.1.14	HVAC
2.1.1.15	Oxygen Hazard Monitoring
2.1.1.16	Propellant Vapor Detection
2.1.1.23	Breathing Air
2.1.1.24	Compressed System Air
2.1.1.25	Fuel

Figure H-5 Work Breakdown Structure (WBS) Examples (concluded)	
Number	**WBS Description**
2.1.1.27	Gaseous Helium System
2.1.1.28	Gaseous Nitrogen
2.1.1.29	Inert Gas Exhausts
2.1.1.34	Miscellaneous Support Equipment
2.1.1.35	Oxidizer
2.1.1.37	Access Platforms
2.1.1.38	Crane Support Equipment
2.1.1.39	Cranes and Hoists
2.1.1.41	Miscellaneous Support Equipment
2.1.1.43	Spin Balance Machine
2.1.1.44	Eye Washes/Decontaminate Showers
2.1.1.46	Hazard Notification
2.1.1.47	Basic Structure
2.1.1.49	Spacecraft Leak Chamber
2.1.1.50	Special Purpose Doors
2.1.1.51	Special Purpose Flooring
2.1.1.54	Potable Water
2.1.1.56	Sanitary Sewer
2.1.2	Generator Building
2.1.2.4	Public Address System
2.1.2.6	Telephone/LAN Wiring
2.1.2.7	TOPS/Digital Voice
2.1.2.9	Grounding
2.1.2.11	Low Voltage
2.1.2.13	Fire Protection
2.1.2.14	HVAC
2.1.2.47	Basic Structure
2.1.2.50	Special Purpose Doors
2.1.2.54	Potable Water
2.1.2.56	Sanitary Sewer
2.1.3	Interim Hardware Storage Facility
2.1.3.4	Public Address System
2.1.3.6	Telephone/LAN Wiring
2.1.3.7	TOPS/Digital Voice
2.1.3.9	Grounding
2.1.3.11	Low Voltage
2.1.3.13	Fire Protection
2.1.3.14	HVAC
2.1.3.47	Basic Structure
2.1.3.50	Special Purpose Doors
2.1.3.54	Potable Water
2.1.3.56	Sanitary Sewer

Appendix I – Cleanroom Janitorial Support

1.0 Purpose and Scope

This appendix identifies the DoD cleanrooms at CCAS requiring janitorial support under this contract.

2.0 Responsibilities

Contractor will provide janitorial service to the cleanrooms identified in Figure I-1.

2.1 Clean-rooms provided as part of a Contamination Control System in a facility identified in Appendix A will be cleaned, inspected, and controlled under the Operations and Maintenance (para 3.3.9) portion of this contract. Janitorial support will be considered one of the critical operations comprising the Contamination Control System of this contract.

Figure I-1 Cleanrooms by Facility*

Facility Name	Location	Sq. Ft	Bay Ht	Class
SPIF	70000 West	Various	Various	100K
PSF High Bay	55840	1900	19	100K
SAB High Bay	49904	4300	38	100K
NPF Airlock	55810,Rm 115	1400	38	100K
NPF Main Bay	55810,Rm 116	4100	25.5	100K
NPF PAM-DM High Bay	55810,Rm 177	3400	38	100K
DPF Fueling Cell	55820	2500	72.2	100K
DPF Airlock	55820	2500	72.2	100K
DPF Encapsulation Bay	55820	2500	72.2	100K
DPF Main Bay	55820	5000	26.5	100K
SLC 17A	1270BY	2700	62	100K
SLC 17B	1270CY	2800	70	100K
Delta Labs	1305G	2000	8	100K
Hangar E	1612, Rm 112	TBD	TBD	400K
Hangar E	1612, Rm 114	TBD	TBD	400K
SLC 41	29100	~5400	~100	100K
SLC 40	47100	~7500	~100	100K
SMAB, East Bay	70000	55,000	TBD	100K
VIB Lab	70500, Rm 105	800	8	100K
VIB Lab	70500, Rm 114	750	8	Environ
VIB Lab	70500, Rm 117	500	8	400K
VIB Lab	70500, Rm 121	TBD	TBD	TBD
VIB Lab	70500, Cell 3	400	50	100K
PFC	70503	TBD	TBD	100K
Hangar AM	60550	TBD	TBD	400K

**(See Appendix A for Contamination Control Systems)*

Appendix J – Ordnance Services

1.0 Purpose and Scope

Figure J-1 provides the locations where ordnance services may be required. Figure J-2 provides requirements for contractor ordnance service personnel.

2.0 Responsibilities

The ordnance services contractor is responsible for : (1) operating at the identified locations and (2) ensuring that ordnance services personnel are trained and qualified to handle ordnance materials.

Figure J-1 Ordnance Service Performance Locations

Cape Canaveral Air Station	Operations	Facility
EOD Disposal Range	√	
Fuel Storage Area 2		√
Fuel Storage Area 5		√
Fuel Storage Area 3		√
Launch Complexes	√	
Patrick AFB	√	
Port Canaveral		
Navy Wharves	√	
Army Outport	√	
Kennedy Space Center		
VAB	√	
OPF	√	
OSF	√	
Hangar AF	√	
FOTL	√	
O&C Building	√	
Parachute Shop	√	
Space Station Processing Facility	√	
Security Police HQ/Range	√	
Ordnance Storage Facility	√	
Space Transport System Launch Pads	√	
Shuttle Landing Facility	√	
Assembly and Refurbishment Facility	√	
Airports		
Patrick AFB Base Operations	√	
Skid Strip	√	
Space Coast Executive	√	
Melbourne	√	
Orlando	√	
Others		
Sites as required within 100 miles of CCAS	√	
Kings Bay, GA	√	
McDill AFB, FL O	√	
Sites as required by operations of authorized Range customers.		

Figure J-2 Ordnance Services Personnel Requirements

1. General

a) Any access to a restricted and/or controlled ordnance facility where material is stored or handled requires the presence of a certified ordnance services technician or supervisor.

b) Ordnance material handling operations (storage or maintenance testing/assembly/rework) require compliance with a two-person rule. Both persons will be qualified ordnance technicians; at least one of which will be an ordnance services technician certified under the terms of this contract.

2. Contractor ordnance services supervisors are required to:

a) Demonstrate 10 years of recorded/certified experience in supervision of and direct work in handling and transportation of explosive materials and items. Satisfactory experience can consist of public/military sector explosive ordnance disposal, conventional and special weapons ordnance support, or commercial explosive device operations (demolition, construction blasting, or other comparable work history).

b) Possess certificate of completion for Defense Packaging of Hazardous Materials for Transportation training (School of Military Packaging Technology, Aberdeen Proving Ground, Maryland); as well as maintain certification currency (biennial requirement for refresher training). This training/certification is to enable the individual supervisor to perform certification of hazardous material shipments.

c) Possess certification as certifying authority for overhead crane operators (Crane Inspection & Certification Bureau or equivalent).

d) Possess Contractor certification as qualified ordnance handlers.

e) Complete CCAS operational site training.

f) Complete annual ordnance services refresher training.

g) Operate microcomputers (includes working knowledge of basic business software applications to include word processing, spreadsheet, and database programs).

h) Possess a final SECRET clearance.

3. Ordnance Services Technicians (non-supervisory personnel) are required to:

a) Demonstrate 5 years of recorded/certified experience in handling and transportation of explosive materials and items. Satisfactory experience can consist of public/military sector explosive ordnance disposal, conventional and special weapons ordnance support, or commercial explosive device operations (demolition, construction blasting, or other comparable work history).

b) Possess Contractor certification as qualified ordnance handlers.

c) Complete CCAS operational site training.

d) Complete annual ordnance services refresher training.

e) Possess Florida Class A Driver's License with HAZMAT Endorsement.

f) Possess Florida Blaster's Permit.

g) Possess a final SECRET clearance.

Appendix K – Accessible Data Product Lists

1.0 Purpose and Scope

Objectives of the LO&SC include 1) providing clear and continuous visibility into all aspects of the program to include information concerning schedule, technical performance, risk, and cost; 2) using information technology to minimize the need for paper deliverables; and 3) leveraging the value of program data by providing wide, easy, on-demand access to virtually all such information. The LO&SC Data Program supports these objectives by providing easy access to any and all data created by the contractor which would be of value to the Government, other contractors, and range users in accomplishing their missions. The Spaceport Intranet Information System is a tool to aid in performing this function. MIL-STD-974, Contractor Integrated Technical Information Service (CITIS), provides conceptual guidance and is intended to be an efficient framework for providing the government with on-line access to contractor generated data, government furnished information, and electronic transfer of this data to DoD information systems. The capabilities of MIL-STD-974 include:

- on-line access to contractor generated data
- electronic notification as each CITIS data item is made available for access
- the ability to search for, view, and comment on data electronically
- file transfer capability to enable the customer to download contractor data files and upload data files to the contractor
- the ability to acknowledge receipt of data

Contractor Data Requirements List (CDRL)

A single master CDRL defines the LO&SC data delivery and access requirements. The contractor Accessible Data Product List (ADPL) is an attachment to this CDRL that defines the Government's minimum requirements for electronic data access and hardcopy deliverable requirements to LO&SC maintained data.

Accessing the Data

The Metropolitan Area Network (MAN) provides local access to working, pre-released, and released data, with authorized remote access by Government LO&SC program users via the internet. If data cannot be provided electronically due to circumstances beyond the contractors' control, the contractor shall provide an alternate delivery means to meet the same requirements.

The contractor's system shall be compatible with standards expressed in the 45 SW and Resident Organizations Requesting Service from the Communications/Computer Network Memorandum of Agreement.

Accessible Data Notification

The LO&SC must notify the appropriate government agencies when certain data is available for government access. Items such as safety incident reports, plans, procedures, financial data, etc., all require the government being notified that new/modified data is available for access. Items such as maintenance schedules or other such databases, where the data is constantly being

updated and does not have an ìending pointî, either do not require government notification or only require notification when an event occurs that may require Government involvement.

Additional Data Access

The ADP List provided in Figure K-1 is not a comprehensive list of all data to be provided. Data generated by the contractor in the course of the performance of this contract which may be useful to the Government, its contractors, or range users which is not specifically listed as an ADPL shall also be made available to the Government, other contractors, and appropriate range users though the structures and processes established for the ADPL. The basic tenet of the contract ADPL is that it is a living document, to be maintained in coordination with the lead Office of Primary Responsibility (OPR)/ Integrated Product Team (IPT) and any other customer it serves, throughout the performance period of the contract. Access to LO&SC Program data not currently cataloged as ADPLs (with the exception of data specifically identified as inaccessible data) will be provided through the same structure and processes defined for the ADPL data unless determined to be otherwise impractical or inappropriate by the program manager.

ADPL Organization

All of the ADP's currently listed are identified with a three-digit sequence number (e.g. *ADPL 015, Interface Control Document),* and have an associated ADP Description Form identifying key information relative to that particular data item. Gaps in the sequence indicate where a data product was originally contemplated, but was later deleted as being not required, identified as a duplicate, or was absorbed in an existing ADP. The list acts as an ADPL index as well as a Responsibility Assignment Matrix to identify the lead OPR/IPT that will be primarily responsible for that particular data item.

Inaccessible Data

A list of data/documentation that will not be available on the MAN to the Government as provided in the Contractor Statement of Work (SOW) is listed below.

1. Classified data;
2. Non-program specific data (e.g. payroll, personnel records);
3. Company and subcontractor proprietary data;
4. Data having restricted rights;
5. Cost/performance data on fixed price CLINS;
6. Large or bulky legacy hard copy documents impractical to convert to softcopy

Classified Data

The MAN is limited to communicating and processing unclassified data. Any classified data shall be stored and processed on a separate, secure classified system and shall be delivered via established encrypted electronic systems and/or in hard copy form.

The ADP Description Form

The ADP Description Form provides the necessary administrative references and descriptive elements to identify and describe each data product quickly and efficiently.

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	1	OPR/IPT:	2	Revision Date	3
Product Name 4					
Source: 5			Basic Program Resp: 6		
Contract No: 7			SOW No: 8		
WBS No: 9		WBS Subtask No: 10		CLIN: 11	
Customer Accessibility Criteria:		12			
Scope:	13				
Content:	14				
Format:	15				
Guidance Documents:		16			
Remarks	17				

1. **ADP No**. Data product identification number.
2. **OPR/IPT.** The applicable or related Office of Primary Responsibility (OPR) / Integrated Product Team (IPT) that is the primary customer for the ADPL data. For example, the IPTs may include the following:

IPT	IPT Chair (example only)
Program Management (PM)	45 OSS/OSMP
Systems Management (SM)	45 OSS/OSME
Mission	Applicable SLS or payload customer
Training	45 OSS/DOT
Safety	45 SW/SE
Security	45 OSS/OSM
Environmental	45 CES/CEV
Quality	45 LG/QC

3. **Revision Date**. Used to identify latest versions of ADP descriptions.
4. **Source**. Identifies the LO&SC or one of its subcontractors who is responsible for the data product.
5. **Basic Program Responsibility**. Indicates source organization's basic program function.
6. **Product Name**. Subject, but not necessarily actual title, of data product.
7. **Contract No**. LO&SC contract number.
8. **SOW No**. A cross-reference to the products related SOW paragraph number(s).
9. **WBS No**. A cross-reference to the products related WBS paragraph number(s).
10. **WBS Subtask No**. Identifies WBS subtask, if applicable.
11. **CLIN**: The Contract Line Item Number (CLIN) associated with the data product.

12. **Customer Accessibility Criteria.** A statement of when the product will initially be released and become accessible, analogous to a CDRL item "delivery" date. Also includes a ìTOî statement indicating the major players who receive this data. This is not an ìall-inclusiveî list, all users on CCAS should have access to the ADPL data unless specifically restricted.
13. **Scope.** Identifies the limits of the subject manner (i.e., hardware, software, specific tasks, etc.) covered by this product.
14. **Content**. A simple list or table of product contents including any applicable DIDs.
15. **Format.** General format description (i.e., formal document, periodical, tabular listing, contract drawing, etc.). Also used to describe any unique formatting for the particular product. Note: where the Resource Data Exchange Standard is applicable and developed, data shall also be made available in that format.
16. **Guidance Documents**. Reference to MIL-Specs, DIDs, or other documents that may be used for guidance.
17. **Remarks**. Information as needed to explain preceding entries or to describe any unique product attributes. May be used to describe hardcopy or encrypted electronic submittal requirement.

Data Item Descriptions (DIDs)

Data Item Descriptions (DIDs) identified in the ADPLs were selected from the "Department of Defense Acquisition Management Systems and Data Requirements Control List (AMSDL), DOD 5010.12L, Volume II." This document identifies acquisition management systems (source documents) and data item descriptions available for contractual application. DID Tailoring is indicated by the addition of the suffix "/T" to the DID number identified on the ADPL. For example, if the DID requirements were modified for DID DI-A-3020B, the ADPL would identify DI-A-3020B/T. Tailoring is used to either relax format requirements or change the DID to be in consonance with the source document. If the requirements of a DID are found to be in conflict with the tailored application of the source document, the source document tailoring shall take precedence.

Data Approval Requirements

While all data is subject to Government approval, selected data requires concurrence prior to final release. The Government technical offices required for concurrence will be identified on the ADPL. The Contractor will provide a method by which the required Government technical offices can indicate their concurrence. This indication will serve as proof of Government technical concurrence to the Contractor and all document recipients.

Distribution Statements

The contractor will incorporate the following statements according to AFI 61-204 on all releasable data requiring such statements.

*** Distribution Statement C**

Distribution limited to U.S. Government agencies and their contractors. Other requests for this data shall be referred to 45 OSS/OSMP, Cape Canaveral AS, FL 32925-2206.

*** Warning Information Subject to Export Control Laws**

This data may contain information subject to the International Traffic in Arms Regulation (ITAR) or the Export Administration Action (EAA), and the National Disclosure Policy (NDP), which may not be exported, released, or disclosed to foreign nationals inside or outside the United States without first obtaining an export license. A violation of the ITAR or NDP may be subject to a penalty of up to 10 years imprisonment and a fine of $100,000. Include this notice with any reproduced portion of this data.

CONTRACT DATA REQUIREMENTS LIST

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 440 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for the contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY
	A	

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
SOW	FO8650-97-	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
001	LO&SC Accessible & Hardcopy Data	Data Distribution

4. AUTHORITY (*Data Acquisition Document No.*)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
See Block 16	SOW	45 OSS/OSMP

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	See Block 16	As Required	As Required

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION

16. Remarks

This CDRL requires the information described on the attached Accessible Data Products List (ADPL) be made available through the Contractor Integrated Technical Informations Service or equivalent service, and/or supplied as hard copies as specified in the ADPL.

Applicable Authority (Blk 4) and Distribution statement requirements (Blk 9) shall be identified in the ADPL. Each ADPL should reference the applicable CLIN, SOW paragraph, and CWBS.

Blk 14a lists potentially available IPTs for acceptance purposes. A Government OPR may be identified on the ADPL.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES		
	Draft	Final	
		Reg	Repro
PM			
SM			
Safety			
Mission			
Security			
Quality			
Training			
Environmental			
15. TOTAL			

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE

DD Form 1423, DEC 94 *(EF)* PREVIOUS EDITIONS ARE OBSOLETE Page 1 of 1 Pages

Figure K-1 Accessible Data Product List

Attachment to CDRL 001			
Seq. No	**ADP Subject**	**OPR/IPT**	**SOW**
001	AIS Security Management Plan	PM	3.1.3-1
002	System Safety Program	Safety	3.1.2-2.1
003	Safety Violations/Incident Report	Safety	3.1.2-2.9
004	Contract Work Breakdown Structure	PM	3.1.1.4-2.1
005	Meeting Agendas, Minutes, & Presentations	Various	3.1.1.4-2.2
006	LO&SC Performance Metrics	PM	3.1.1.4-2.4
007	Status of Contractor Accessible Products Data Lists	PM	3.1.1.4-2.5
008	Spaceport Operation User's Guide	Mission	3.1.4.1-2.1
009	Spaceport Operations Concepts Studies	PM	3.1.4-2.1
010	Contractor Cost Data	Mission	3.1.5-1
011	Performance & Cost Report	PM	3.1.5-1
012	Contract Funds Status Report	PM	3.1.5-1
013	Weekly Cost Detail Report	Various	3.1.5-2.5
014	Monthly Variance Analysis	PM	3.1.5-2.9
015	Interface Control Document	SM	3.2.1-2.1
016	Mission Peculiar Interface Control Document (MPICD)	Mission	3.2.1-2.3
017	System Baseline	SM	3.2.2-2.4
018	Failure Modes, Effects and Criticality Analysis (FMECA)	SM	3.2.3-1
019	Hazard Analysis Plan	SM	3.2.4-2.1
020	Logistic Support Analysis Plan	SM	3.2.5-2.1
021	Maintenance Plan	SM	3.2.5-2.2
022	Preventative Maintenance Check and Service	SM	3.2.5-2.3
023	Logistics Support Analysis Record (LSAR)	SM	3.2.5-2.4
024	Operations and Maintenance Procedures for Service Systems	SM	3.2.6-1
025	Mission Peculiar Procedures	Mission	3.2.6-1
026	Configuration Management Plan	SM	3.2.7-1
027	Engineering Change Proposal	SM	3.2.7-2.2
028	Request for Deviation	SM	3.2.7-2.2
029	Request for Waiver	SM	3.2.7-2.2
030	Interface Change Notice	SM	3.2.7-2.2
031	Configuration Status Accounting Information	SM	3.2.7-2.4
032			
033	Systems Engineering Master Plan	SM	3.2.7-1
034	Engineering Release Record	SM	3.2.8-1
035	Control Plan for Operations and Maintenance	PM	3.3.1-1
036	Monthly Status Summary	PM	3.1.1.4-2.6
037	Schedule Database	Mission	3.3.5-1
038	Project Status and Projections	Mission	3.3.5-1
039			
040	Deferral Requests	Mission	3.3.6-1
041	Contamination Control Plan	Mission	3.3.11-2.4
042	Corrosion Control Plan	Mission	3.3.20-1
043	Fixed Price Estimate	PM	3.1.5
044	JON Scrub Costs	PM	3.1.5
045			
046			
047	Quality Program Plan	Quality	3.5-1
048	Workload Activity Summary	Ordnance	3.6.2-1
049	Safety Surveillance Checklists	Ordnance	3.6.2-1
050	Ordnance Training and Certification Program	Ordnance	3.6.2-2.1
051	Ordnance Materials Account Status	Ordnance	3.6.2-2.3
052	Ordnance Materials Account Transactions	Ordnance	3.6.2-2.3
053	Operational Training and Badging Plan	Training	3.6.3-1
054	Operational Training and Badging Database	Training	3.6.3-1

Figure K-1 Accessible Data Product List (concluded)			
Attachment to CDRL 001			
Seq. No	**ADP Subject**	**OPR/IPT**	**SOW**
055	Visitor Records Center Database	PM	3.6.4-1
056			
057	Commodity Status Report	Mission	3.6.5-1
058	Spaceport Intranet Information System User Guide	PM	3.1.6-2.5
059	Spaceport Intranet Information System Index	PM	3.1.6-2.5
060	Resource Data Exchange Standard Specification	PM	3.1.6-2.7
061			
062	Communications Plan	Mission	3.6.1.1-1
063	Mission Script	Mission	3.6.1.2-1
064	Launch Operations Handbook	Mission	3.6.1.3-1
065	Console Level Voice Matrix	Mission	3.6.1.4-1
066	Seating Plan	Mission	3.6.1.4-1

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	001	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Automated Information Systems (AIS) Security Management Plan				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**	3.1.3-1		
WBS No: 1.3	**WBS Subtask No:** 1.3		**CLIN:** 0001		
Customer Accessibility Criteria:	Accessible 60 DAC, updated as required TO: Communications Security				
Scope:					
Content:	Reference: DI-IPSC-80694/T. Content of the plan shall be as prescribed by AFI 31-601 plus sup.				
Format:	Contractor format acceptable.				
Guidance Documents:	AFI 31-601, DOD R 5220.22R (Industrial Security Regulation)				
Remarks	Notify when available				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	002	**OPR/IPT:**	Safety	**Revision Date**	
Product Name	System Safety Program				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**	3.1.2-2.1		
WBS No: 2.4	**WBS Subtask No:** 2.4		**CLIN:** 0002		
Customer Accessibility Criteria:	Accessible 60 DAC, updated as required TO: Safety, SM				
Scope:					
Content:	Reference: DI-SAFT-80100A/T				
Format:	Contractor format acceptable.				
Guidance Documents:	EWR 127-1, 29 CFR1910, 29CFR1926, Mil-Std-882C, AFI 91-204, 45 SWR 127-3, ESMC OPLAN 127-4, MDC Y0601S				
Remarks	Notify when available				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	003	**OPR/IPT:**	Safety	**Revision Date**	
Product Name	Safety Violations/Incident Report				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**	3.1.2-2.9		
WBS No: 1.3		**WBS Subtask No:** 1.3		**CLIN:** 0001	
Customer Accessibility Criteria:		Verbal notification immediate, report within 5 days of incident TO: OG Squadrons, Safety, PM			
Scope:					
Content:	Content per Mil-Std-882C tailored per Appendix G				
Format:					
Guidance Documents:	EWR-127-1, Mil-Std-882C				
Remarks	Notify when report is available				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	004	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Contract Work Breakdown Structure				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**	3.1.1.4-2.1		
WBS No: 1.1.4.1		**WBS Subtask No:** 1.1.4.1		**CLIN:** 0001	
Customer Accessibility Criteria:		TO: PM, 45 SW/FM			
Scope:					
Content:	Reference: DI-MGMT-81334/T				
Format:					
Guidance Documents:	MIL-HDBK-881,				
Remarks	Notify when available				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	005	**OPR/IPT:**	Various	**Revision Date**	
Product Name	Meeting Agendas, Minutes, & Presentations				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:** 3.1.1.4-2.2		
WBS No: 1.1.4.2		**WBS Subtask No:** 1.1.4.2		**CLIN:** 0001	
Customer Accessibility Criteria:	Agenda 3 WD prior to meeting/review Draft minutes 5 WD after meeting/review TO: OG Squadrons, meeting attendees				
Scope:					
Content:					
Format:	Contractor format acceptable.				
Guidance Documents:					
Remarks	Minutes will be signed by both the Government (includes ASC/ERD representative when in attendance) and contractor chairpersons as applicable.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	006	**OPR/IPT:**	PM	**Revision Date**	
Product Name	LO&SC Performance Metrics				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:** 3.1.1.4-2.4		
WBS No: 1.1.4.4		**WBS Subtask No:** 1.1.4.4		**CLIN:** 0001	
Customer Accessibility Criteria:	Update as needed TO: PM, OG Squadrons				
Scope:					
Content:					
Format:	Contractor format acceptable				
Guidance Documents:					
Remarks	Metrics may change over time to reflect changing requirements/interests. Notify when available. Metric data implicit in databases or other electronic forms shall have the same ready accessibility. Shall also be periodically compiled into appropriate presentation formats.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	007	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Status of Contractor Accessible Data Products List (ADPL)				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:** 3.1.1.4-2.5			
WBS No: 1.1.4.5		**WBS Subtask No:** 1.1.4.5		**CLIN:** 0001	
Customer Accessibility Criteria:	Update as needed TO: PM				
Scope:					
Content:	Summarize status of ADPLs accessibility, deliveries, and projected availability				
Format:	On-line database listing status				
Guidance Documents:					
Remarks	Notify when status changes available				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	008	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Spaceport Operation User's Guide				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:** 3.1.4.1-2.1			
WBS No: 1.4.1		**WBS Subtask No:** 1.4.1		**CLIN:** 0001	
Customer Accessibility Criteria:	180 DAC, updated as needed TO: new users				
Scope:					
Content:	Reference DI-FACR-8010. Describe how a new user interfaces with the LO&SC and the processes and documentation requirements involved in operating from CCAS. Include organizational relationships, requirements definition and submittal processes, generic test flows and milestones, and scheduling systems. Include photographic illustrations of various Service System areas of interest, floor plans, and areas available for storage and a technical description of the facility. Describe the propellant loading methods possible, equipment cooling, electrical power, lighting, environmental control and monitoring, voice and data communication capabilities, etc.				
Format:	Both on-line, hypertexted format and paper documents format required. Details of each formats may be determined by Contractor				
Compliance Documents:					
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	009	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Spaceport Operations Concepts Studies				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:** 3.1.4.2-1			
WBS No: 1.4.2		**WBS Subtask No:** 1.4.2		**CLIN:** 0001	
Customer Accessibility Criteria:	Perform as needed				
Scope:					
Content:	Reference DI-MGMT-80057				
Format:	Contractor format acceptable				
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	010	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Contractor Cost Data				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:** 3.1.5-1			
WBS No: 1.5		**WBS Subtask No:** 1.5		**CLIN:** 0001	
Customer Accessibility Criteria:	Accessibility shall be 60 days after start of contract. Accessibility restricted to personnel authorized by PM. Accessibility by authorized non-government customers will be limited to data subsets which will prevent derived labor rate information.				
Scope:					
Content:					
Format:	On-line database, Contractor format acceptable.				
Guidance Documents:					
Remarks	Provide structured query tool to access custom reports derived from any range or subset of data fields available in the Weekly Cost Detail Report.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	011	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Performance & Cost Report				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**	3.1.5-1		
WBS No: 1.5		**WBS Subtask No:** 1.5		**CLIN:** 0001	
Customer Accessibility Criteria:	Initial accessibility shall be 25 calendar days after close of contractor's first full monthly accounting period after contracting period. Subsequent updates shall not be more than 25 calendar days after close of contractor's monthly accounting period. TO: PM, FM				
Scope:					
Content:	Reference: DI-FNCL-80912/T				
Format:					
Remarks	a. Reporting levels shall be in accordance with the WBS in Attachment 1, Appendix IV, until any proposed changes to WBS structure are contractually approved. From that time on, reporting levels shall be in IAW approved WBS. Reconciliation between the CFSR and P&CR shall be submitted as an attachment to the CSFR. b. Report cost and hour variances greater than +/-10%. Provide explanations for variances. c. Variance analysis shall be reported to the lowest WBS level required to completely describe the problem. d. Critical/major subcontractor summary level performance measurement data shall be reported as an attachment. Subcontractor variances as determined by the prime shall also be explained. Notify when available				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	012	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Contract Funds Status Report				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**	3.1.5-1		
WBS No: 1.5		**WBS Subtask No:** 1.5		**CLIN:** 0001	
Customer Accessibility Criteria:	Initial accessibility shall be 25 calendar days after close of contractor's first full monthly accounting period after contracting period. Subsequent updates shall not be more than 25 calendar days after close of contractor's monthly accounting period. TO: PM, FM				
Scope:	Last day of the contractor's monthly accounting period nearest the end of the calendar quarter.				
Content:	Reference: DI-f-6004B/T				
Format:	Contractor format acceptable.				
Guidance Documents:					
Remarks	a. Report by appropriation and fiscal year to the reporting elements indicated on the CWBS in Appendix IV to Atch 1 until any proposed changes to WBS are approved. Thereafter, report to the approved WBS. b. A reconciliation between the CFSR and the P&CR shall be submitted as an attachment to the CFSR. c. CSFR data shall be reconciled to the Government's fiscal year (FY) end at 30 September if the contractor's FY does not coincide with the Government's. d. Report shall contain forecast by month for the next six months, by quarter for the remaining fiscal year, and by year for the remaining fiscal years.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION

ADP No:	013	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Weekly Cost Detail Report				

Source:	**Basic Program Resp:**	
Contract No:	**SOW No:** 3.1.5-2.5	
WBS No: 1.5	**WBS Subtask No:** 1.5	**CLIN:** 0001
Customer Accessibility Criteria:	TO: PM, 45 SW/FM, OG squadrons	
Scope:		
Content:		

Format: Data Field Format is:

JOCAS II **JOCAS** **25/07/97**

ITEM	Columns	Format	Action
Aid	1 - 2	alpha	Constant "A5"
jon	3 - 10	alpha	JON - zero fill
charge date	11 - 19	date	DD-MON-YY - Date Cost Incurred
fc	20 - 21	alpha	"30" constant
local use	22 - 25	alpha	Zero Filled
rc/cc	26 - 31	alpha	same
ps-code	32 - 36		blank
eeic	37 - 41	alpha	same
trans-type	42- 42	alpha	Constant "C"
quanity	43 - 56	numeric	-" before significant digit, "+" assumed NO ZERO FILL
amt	57 - 70	numeric	same as for quantity
fy	71 - 72	alpha	same - Fiscal Year of charge
ssn	73 - 83		blank
lname	84 -98		blank
hours	99 - 103		blank
hours-type	104 - 104		blank
shift	105 - 105		blank
edp-percent	106 - 108		blank
distr-code	109 - 112		blank
local use	113 - 118		blank
Cust Name/Ph #	119 - 143		blank
Contract number	144 -154		blank
bal-id	155 - 155		blank
fund-source	156 - 156		blank
bal-id-sub	157 - 162		blank
job-type	163 - 164		blank
Contractor org	165 - 168		blank
work phase code	169 - 169		blank
facility code	170 - 183		same - leave trailing blanks
main-effort	184 - 189		sow para
sub-effort	190 - 192		sow para
sow-annex	193 - 194	alpha	blank
oban-yr	195 - 195		Need "FY"
oban	196 - 197	alpha	"LE"
oac	198 - 199	alpha	"83"
pec	200 - 205		blank
rmb-ind	206 - 206		blank
location-code	207 - 208		same
test -number	209 - 213		same
Customer Code	214 - 218		blank
won	219 - 226		same
wbs	227 - 236		same
location -area	237 - 238		same
location-complex	239 - 240		same
location-pad	241 - 241		same
comments	242 - 321		Leave trailing blank
bpac	322 - 327		blank
ba	328 - 329		"01" constant
Sales Code	330-332		blank

Guidance Documents:	
Remarks	Use a network protocol compatible with the following standards: (1) IEEE 802.3 ETHERNET, (2) TCP/IP, and (3) File Transfer Protocol

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	014	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Monthly Variance Analysis				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**	3.1.5-2.9		
WBS No: 1.5		**WBS Subtask No:** 1.5		**CLIN:** 0001	
Customer Accessibility Criteria:		TO: FM, PM; Monthly			
Scope:					
Content:					
Format:	Contractor format acceptable				
Guidance Documents:					
Remarks	Provide a detailed variance analysis of the difference in contractor costs versus costs reported to the government cost collecting system. Current transactions affecting prior fiscal year (FYs) shall be included with cumulative current year activity balances in the monthly submissions.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	015	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Interface Control Document (ICD)				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**	3.2.1-2.1		
WBS No: 2.1		**WBS Subtask No:** 2.1		**CLIN:** 0002	
Customer Accessibility Criteria:		See Systems Engineering Master Plan (ADPL 033)			
Scope:					
Content:	Reference: DI-CMAN-81248				
Format:	Contractor format acceptable				
Guidance Documents:		SAMSO-STD-77-4			
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	016	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Mission Peculiar Interface Control Document (MPICD)				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.2.1-2.3	
WBS No: 2.1		**WBS Subtask No:** 2.1		**CLIN:** 0002	
Customer Accessibility Criteria:		Final document delivered prior to start of mission peculiar need date. TO: Restricted to activities or users requiring use of the MPICD.			
Scope:					
Content:	Reference: DI-FACR-80910/T				
Format:	Contractor format acceptable for new MPICDs				
Guidance Documents:					
Remarks	Submit proposed changes to existing MPICDs, if needed. For existing documents: maintain to reflect permanent changes in configuration, using existing format. Updates shall be controlled to maintain document configuration and clearly indicate changes. New MPICDs shall be prepared as stand-alone documents to include cargo element peculiar requirements for the service systems.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	017	**OPR/IPT:**	SM	**Revision Date**	
Product Name	System Baseline				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.2.2-2.4	
WBS No: 2.1		**WBS Subtask No:** 2.1		**CLIN:** 0002	
Customer Accessibility Criteria:		See Systems Engineering Master Plan (ADPL 033)			
Scope:					
Content:	Reference: DI-CMAN-81121/T Reference: Mil Std 973 and DI-CMAN-81121/T. DID DI-CMAN-81121/T tailored as follows: blk 10. Para.10.3 - Immediately following the word 'contractor', in the sixth line add the following: 'The documents and sources indicated in Figure I, II, and III are included as information only. These types of documents may not exist in all cases and some are known not to exist. Prepare Baseline description documentation as required by SOW paragraph 3.2.2. Utilize existing drawing and documents to the maximum extent practicable.'				
Format:	Contractor format acceptable				
Guidance Documents:		MIL-STD-973; MIL-STD-490B			
Remarks	Use existing drawing and documents that satisfy requirements to the maximum extent practicable. Drawings in electronic format shall be available via on-line access.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	018	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Failure Modes, Effects and Criticality Analysis (FMECA)				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**	3.2.3-1		
WBS No: 2.3		**WBS Subtask No:** 2.3		**CLIN:** 0002	
Customer Accessibility Criteria:	See Systems Engineering Master Plan (ADPL 033)				
Scope:					
Content:	Reference DR-R-7085, and MIL-STD 1629A				
Format:	Contractor format acceptable				
Guidance Documents:	MIL-STD-1629A				
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	019	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Hazard Analysis Plan				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**	3.2.4-2.1		
WBS No: 2.4		**WBS Subtask No:** 2.4		**CLIN:** 0002	
Customer Accessibility Criteria:	See Systems Engineering Master Plan (ADPL 033) TO: SM, Safety				
Scope:					
Content:	Reference: DI-SAFT-80801Band MIL-STD 882C				
Format:	Contractor format acceptable.				
Compliance Documents:	EWR 127-1				
Guidance Documents:	MIL-STD-882C				
Remarks	For new systems, a preliminary hazard analysis shall be submitted. As a minimum, a completed draft hazard analysis is required with submittal of ECP. Some hazard analysis reports currently exist on spacecraft facilities.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	020	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Logistic Support Analysis Plan				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**	3.2.5-2.1		
WBS No: 2.5		**WBS Subtask No:** 2.5		**CLIN:** 0002	
Customer Accessibility Criteria:		See Systems Engineering Master Plan (ADPL 033)			
Scope:					
Content:	Reference: DI-ILSS-80531/T. DD Form 1664 is tailored as follows: a. BLK 7. Para 7.1 - Add the following immediately after the words MIL-STD-1388-1A "as tailored in SOW, Section J, App. E" b. BLK 7. Para 7.2 - Delete line 7.2a in its entirety. c. BLK 10. Para 10.3.1 - The words "...new system/equipment..." shall mean all service systems identified within the SOW for the purpose of this DID. This is to clarify that LSAP tasks shall be performed on all such systems and to avoid confusion with the terms " new " and "existing" found in the tailored MIL-STD-1388-1A, SOW, Sect. J, App. E. where they do serve to differentiate applicable taskings. d. BLK 10. Para 10.3.5 - Delete the words "... other Integrated Logistic Support (ILS) program requirements and..." in their entirety. e. BLK 10. Para 10.3.6 - Delete lines d., e., f., j., and k. in their entirety. f. BLK 10. Para 10.3.6 - Delete lines d., e., f., j., and k. in their entirety. g. BLK 10 Para 10.3.6 lines a. thru c., g. thru i., and l. thru p. Delete the word "... Program..." each time it appears. h. BLK 10. Para 10.3.7 - Delete the words "...National Stock Number (NSN), ..." and "... Contractor and Government Entity (CAGE)..." in their entirety.				
Format:	Contractor format acceptable				
Guidance Documents:		MIL-STD-1388-1A			
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	021	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Maintenance Plan				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.2.5-2.2	
WBS No: 2.5		**WBS Subtask No:** 2.5		**CLIN:** 0002	
Customer Accessibility Criteria:		See Systems Engineering Master Plan (ADPL 033) TO: OG Squadrons, SM			
Scope:					
Content:	Reference: DI-ILSS-801196 and MIL-STD 1388-2B				
Format:	Contractor format acceptable				
Guidance Documents:		MIL-STD-1388-2B			
Remarks	NOTE: DED means Data Element Description and comes from Mil-Std-1388-2B <u>Maintenance Plan Data Elements:</u> DED 019 Alternate LCN Number 043, Change Authority Number 096, End Item Acronym Code 162, Indenture Code 172, Interchangeability Code 177, Support Equipment Item Category Code 180, Item Function 182, Item Name 199, LSA Control Number 201, LCN Nomenclature 203, LCN Type 207, Maintenance Concept 210, Maintenance Plan Rationale 211, Maintenance Replacement Rate 214, Maintenance Task Distribution 238, Annual Operating Requirement 253, National Stock Number 258, Next Higher Assembly (NHA) 281, Overhaul Replacement Rate 329, Recommended Minimum System Stock Level 337, Support Equipment Reference Number 341, RAM Characteristics Narrative Code 360, SERD Revision 389, Source, Maint., and Recoverability Code 392, Special Maintenance Item Code 427, Task Code 431, Task Identification 505, Wearout life				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	022	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Preventative Maintenance Check and Service				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.2.5-2.3	
WBS No: 2.5		**WBS Subtask No:** 2.5		**CLIN:** 0002	
Customer Accessibility Criteria:		See Systems Engineering Master Plan (ADPL 033) TO: OG Squadrons, SM			
Scope:					
Content:	Reference: DI-ILSS-81157/T and MIL-STD 1388-2B				
Format:	Contractor format acceptable				
Guidance Documents:		MIL-STD-1388-2B			
Remarks	NOTE: DED means Data Element Description and comes from Mil-Std-1388-2B <u>Preventative Maintenance Check and Service Data Elements:</u> DED 019, Alternate LSA Number 096, End Item Acronym Code 199, LSA Control Number 201, LCN Nomenclature 203, LCN Type 208, Maintenance Interval 238, Annual Operating Requirement 275, Operational Requirement Indicator 349, Task Remark Reference Code 372, Sequential Subtask Description 407, Subtask Number 427, Task Code 432, Task Remark 433, Task Type 440, Technical Manual Number 501, Usable On Code				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	023	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Logistics Support Analysis Record (LSAR)				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.2.5-2.4	
WBS No: 2.5		**WBS Subtask No:** 2.5		**CLIN:** 0002	
Customer Accessibility Criteria:		See Systems Engineering Master Plan (ADPL 033)			
Scope:					
Content:	Reference: DI-ILSS-81173/T and MIL-STD 1388-2B				
Format:	Contractor format acceptable				
Guidance Documents:	MIL-STD-1388-2B				

Remarks

NOTE: DED means Data Element Description and comes from Mil-Std-1388-2B

Logistics Support Analysis Record (LSAR) Data Elements:

DED 019 Alternate LCN Number
043, Change Authority Number
096, End Item Acronym Code
162, Indenture Code
172, Interchangeability Code
177, Support Equipment Item Category Code
180, Item Function
182, Item Name
199, LSA Control Number
201, LCN Nomenclature
203, LCN Type
207, Maintenance Concept
208, Maintenance Interval
210, Maintenance Plan Rationale
211, Maintenance Replacement Rate
214, Maintenance Task Distribution
238, Annual Operating Requirement
253, National Stock Number
258, Next Higher Assembly (NHA)
275, Operational Requirement Indicator
281, Overhaul Replacement Rate
329, Recommended Minimum System Stock Level
337, Support Equipment Reference Number
341, RAM Characteristics Narrative Code
349, Task Remark Reference Code
360, SERD Revision
372, Sequential Subtask Description
389, Source, Maint., and Recoverability
407, Subtask Number
427, Task Code
431, Task Identification
432, Task Remark
433, Task Type
440, Technical Manual Number
501, Usable On Code
505, Wearout life

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION

ADP No:	024	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Operations and Maintenance Procedures for Service Systems				
Source:			**Basic Program Resp:**		
Contract No:				**SOW No:**	3.2.6-1
WBS No: 2.6		**WBS Subtask No:** 2.6		**CLIN:** 0002	
Customer Accessibility Criteria:	See Systems Engineering Master Plan (ADPL 033) TO: OG Squadrons, SM				
Scope:					
Content:	Reference: DI-ILSS-80493				
Format:	Contractor format acceptable				
Guidance Documents:					
Remarks	Notify when available				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	025	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Mission Peculiar Procedures				
Source:			**Basic Program Resp:**		
Contract No:				**SOW No:**	3.2.6-1
WBS No: 2.6		**WBS Subtask No:** 2.6		**CLIN:** 0002	
Customer Accessibility Criteria:	Final accessible by need date TO: OG Squadrons, SM				
Scope:					
Content:	Reference: DI-MGMT-80937				
Format:	Contractor format acceptable.				
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	026	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Configuration Management Plan				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.2.7-1	
WBS No: 2.7		**WBS Subtask No:** 2.7		**CLIN:** 0002	
Customer Accessibility Criteria:		See Systems Engineering Master Plan (ADPL 033) TO: OG Squadrons, SM			
Scope:					
Content:	Reference: DI-CMAN-80858A/T				
Format:	Contractor format acceptable.				
Guidance Documents:		MIL-STD 973			
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	027	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Engineering Change Proposal				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.2.7-2.2	
WBS No: 2.7		**WBS Subtask No:** 2.7		**CLIN:** 0002	
Customer Accessibility Criteria:		As Required TO: OG Squadrons, SM			
Scope:					
Content:	Reference: DI-CMAN-80639A and MIL-STD 973				
Format:	Contractor format acceptable				
Guidance Documents:		MIL-STD-973			
Remarks	DD Form 1692/2, Line 38 n will include request for environmental review of proposed operations/activities with potential environmental impacts on AF Form 813. Provide all information required to develop environment permit application and comply with such permits.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	028	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Request for Deviation				
Source:		**Basic Program Resp:**			
Contract No:			**SOW No:**	3.2.7-2.2	
WBS No: 2.7		**WBS Subtask No:** 2.7		**CLIN:** 0002	
Customer Accessibility Criteria:		As Required TO: OG Squadrons, SM			
Scope:					
Content:	Reference: DI-CMAN-80640 and MIL-STD 973				
Format:	Contractor format acceptable.				
Guidance Documents:		MIL-STD-973			
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	029	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Request for Waiver				
Source:		**Basic Program Resp:**			
Contract No:			**SOW No:**	3.2.7-2.2	
WBS No: 2.7		**WBS Subtask No:** 2.7		**CLIN:** 0002	
Customer Accessibility Criteria:		As Required. TO: OG Squadrons, SM			
Scope:					
Content:	Reference: DI-CMAN-80841 and MIL-STD 973				
Format:	Contractor format acceptable.				
Guidance Documents:		MIL-STD-973			
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	030	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Interface Change Notice				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.2.7-2.2	
WBS No: 2.7		**WBS Subtask No:** 2.7		**CLIN:** 0002	
Customer Accessibility Criteria:		As Required. TO: OG Squadrons, SM			
Scope:					
Content:	Reference: DI-CMAN-81253 and MIL-STD 973				
Format:	Contractor format acceptable.				
Guidance Documents:		MIL-STD-973			
Remarks	LO&SC must obtain current users concurrence or reconcile all users comments on proposed change to configuration. Note: Required as part of ECP package if Interface Control Document is affected by proposed change.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	031	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Configuration Status Accounting Information				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.2.7-2.4	
WBS No: 2.7		**WBS Subtask No:** 2.7		**CLIN:** 0002	
Customer Accessibility Criteria:		As Required. TO: SM			
Scope:					
Content:	Reference: DI-CMAN-81253 and MIL-STD 973				
Format:	Contractor format acceptable.				
Guidance Documents:		MIL-STD-973			
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	032	**OPR/IPT:**		**Revision Date**	
Product Name					
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**		
WBS No:		**WBS Subtask No:**		**CLIN:**	
Customer Accessibility Criteria:					
Scope:					
Content:					
Format:					
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	033	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Systems Engineering Master Plan				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.2.7-1	
WBS No: 2.7		**WBS Subtask No:** 2.7		**CLIN:** 0002	
Customer Accessibility Criteria:		TO: SM, OG Squadrons 120 DAC, updated as required			
Scope:					
Content:	Delivery schedule for Systems Engineering work, to include facility/system priority, determined by a contractor and government team.				
Format:	Contractor format acceptable.				
Guidance Documents:		MIL-STD-499B (Draft)			
Remarks	Requires bilateral concurrence of SM and LO&SC contractor				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	034	**OPR/IPT:**	SM	**Revision Date**	
Product Name	Engineering Release Record				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.2.8-1	
WBS No: 2.8		**WBS Subtask No:** 2.8		**CLIN:** 0002	
Customer Accessibility Criteria:		As Required.			
Scope:					
Content:	Reference: DI-CMAN-80643 and MIL-STD 973				
Format:	Contractor format acceptable				
Guidance Documents:		MIL-STD-973			
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	035	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Control Plan for Operations and Maintenance				
Source:		**Basic Program Resp:**			
Contract No:			**SOW No:**	3.3.1-1	
WBS No: 3.1		**WBS Subtask No:** 3.1		**CLIN:** 0001	
Customer Accessibility Criteria:					
Scope:	Procedures shall be narrow in scope, limited to a basic task that requires one specific manloading and set of safety and security requirements. As a minimum, a major operation (such as propellant loading) should be divided into five different procedures to cover five different tasks (e.g., facility preparation, LOS/PSC ground support equipment (GSE) set up, actual operation, securing of GSE, and securing of the facility).				
Content:	Reference DI-MGMT-80937/T 1. Procedures: O&M (a) Each procedure shall be in compliance with EWR 127-1 and shall have only specific, applicable controls/warnings associated with the task. Each procedure shall also have only specific and applicable security requirements associated with the task. Overall (generic) security and safety controls shall be implemented by associated plans for the facility. (b) Tasks requiring the same steps except for location of work or placement of hardware (e.g., South Integration Cell vs North Integration Cell, J-hook locations) shall be one procedure listing the options provided as an attachment. These procedures would not be classified until specific mission peculiar options are chosen. 2. Procedures: Mission Peculiar Integrated procedures shall be work authorization documents consisting of a list of the stand-alone procedures (LOS and PSC) to be accomplished to support a mission and two attachments. The first attachment shall be a list of the mission peculiar LOS procedure options including procedure number, specific option, and associated step/task number identified. a. Procedure Changes: A system to document procedure changes while procedure is being used shall be separate from procedure changes accomplished prior to operational use. b. Tasks Not Covered By Existing Approved Procedures: A system for near real-time accomplishment of tasks (correction of configuration of facility, recertifying of hardware, incident backout procedures) shall be established with clear ground rules on contractor and Government approval, formatting of tasking, etc. These tasks shall be reviewed after use (within 30 days) to determine if the tasks should be incorporated as a stand alone procedure per paragraph 1. c. Work Authorization Documents Integrated procedures (paragraph 2) shall be the only "procedure" considered to be work authorization. All other procedures shall require another type of work authorization to accomplish the specific tasks. d. This plan shall include the controls for writing, approval, validation, and change control for maintenance procedures.				
Format:	Contractor format acceptable.				
Guidance Documents:					
Remarks	a. Show how operation and maintenance control is under a single focal point. Also include the identifying and controlling discrepant conditions and equipment to prevent its unauthorized use. b. The Procedure System Plan shall include the contractor's organization and implementation scheme to ensure all procedures are complete within 6 months after plan approval per the content instructions. The plan shall provide specific examples to define the format of all documentation tested.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	036	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Monthly Status Summary				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.1.1.4-2.6	
WBS No: 1.1.4.6		**WBS Subtask No:** 1.1.4.6		**CLIN:** 0001	
Customer Accessibility Criteria:		PM, OG squadrons, CE, MOCC			
Scope:					
Content:	Status of work for the previous month in all areas of the contract, including comprehensive report of Service System Management performance-to-date, schedule, and synopsis of work effort.				
Format:	Contractor format acceptable				
Guidance Documents:					
Remarks	Notify when available. Underlying data should be continually available				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	037	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Schedule Database				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.3.5-1	
WBS No: 3.5		**WBS Subtask No:** 3.5		**CLIN:** 0001	
Customer Accessibility Criteria:		Update as required TO: OG Squadrons, MOCC			
Scope:					
Content:	Reference: DI-MISC-81183/T . All relevant schedule data including all maintenance activities, relevant operational activities (unclassified), etc. Include historical baseline of actual results.				
Format:					
Guidance Documents:					
Remarks	Data shall be available continually in a form that can be queried as desired by the user, however the following specific views of the database shall be prepared and made available in both paper and electronic formats: 72 HOUR/11 DAY MAINTENANCE SCHEDULE. Defines activities within the facility for a 14-day period. First three (3) days projected by shift/hours. Includes scheduled operations and maintenance activities, including preventative maintenance, precision equipment calibration, and routine equipment servicing. 2 MONTH MAINTENANCE SCHEDULE. Details planned maintenance of processing areas and equipment 2 months in advance. Identifies activities to the level necessary to identify and assess conflicts. Contractor shall create an "as-run" version for historical purposes. 12 MONTH MAINTENANCE SCHEDULE. Details planned maintenance of processing areas and equipment 12 months in advance. Identifies activities to the level necessary to identify and assess conflicts. Contractor shall create an "as-run" version for historical purposes. EQUIPMENT SCHEDULE. Details equipment status, maintenance schedule, last time maintenance was performed, when next maintenance is due, POC with phone number, etc. FACILITY UTILIZATION SCHEDULE (6 Month). Details use of spacecraft processing areas and equipment 6 months in advance. Identifies activities to the level necessary to identify and assess conflicts. Contractor shall create an "as-run" version for historical purposes. FACILITY UTILIZATION SCHEDULE (5 Year). Details use of spacecraft processing areas/facilities 5 years in advance. Identifies activities to the level necessary to identify and access conflicts. MISSION PLANNING SCHEDULE. Provides major processing timelines for specific spacecraft flows. Displays pertinent activity for a particular mission from hardware receipt through GSE/ASE shipment back to the factory. Contractor shall create "as-run" version for historical purposes.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	038	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Project Status and Projections				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**	3.3.5-1		
WBS No: 3.5		**WBS Subtask No:** 3.5		**CLIN:** 0001	
Customer Accessibility Criteria:		Update minimum of every two weeks TO: OG Squadrons, CE, MOCC			
Scope:					
Content:	Include information regarding on-going projects through completion of project. Include issues and solutions. Also include information on proposed projects, why they should be done, proposed timeline, and impact if not completed.				
Format:	Contractor format acceptable. Data should be compatible with ADPL 037 data.				
Guidance Documents:					
Remarks	Projected projects do not require full design at beginning. If project is approved and implemented, more details should be added. Relevant schedule and task data shall be included in ADPL 037 Schedule Database				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	039	**OPR/IPT:**		**Revision Date**	
Product Name					
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**			
WBS No:		**WBS Subtask No:**		**CLIN:**	
Customer Accessibility Criteria:					
Scope:					
Content:					
Format:					
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	040	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Maintenance Deferrals Requests				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.3.6-1	
WBS No: 3.6		**WBS Subtask No:** 3.6		**CLIN:** 0001	
Customer Accessibility Criteria:		FAC approval required. TO: OG Squadrons, SM, CE			
Scope:					
Content:					
Format:					
Guidance Documents:					
Remarks	Develop and maintain a maintenance deferral database				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	041	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Contamination Control Plan				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.3.11-2.4	
WBS No: 3.2		**WBS Subtask No:** 3.2		**CLIN:** 0001	
Customer Accessibility Criteria:		Update as required TO: OG Squadrons, SM			
Scope:					
Content:	Reference: DI-MISC-80411/T. Include site-specific clean-room constraints, procedures, and entry control processes as required.				
Format:	Contractor format acceptable.				
Guidance Documents:		SD-YV-0073, MIL-STD 1246C, FED-STD 209E			
Remarks	Notify when available				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	042	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Corrosion Control Plan				
Source:			**Basic Program Resp:**	3.3.20-1	
Contract No:			**SOW No:**		
WBS No: 3.2		**WBS Subtask No:** 3.2		**CLIN:** 0001	
Customer Accessibility Criteria:		Update as required TO: OG Squadrons, SM, CE			
Scope:					
Content:	Include methods, schedules, priorities, etc.				
Format:	Contractor format acceptable				
Guidance Documents:		AFI 32-1054, AFPC 21-105, KSC-STD-C-000IC,			
Remarks	Notify when available				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	043	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Fixed Price Estimate				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.1.5	
WBS No: 1.5		**WBS Subtask No:** 1.5		**CLIN:** 0001	
Customer Accessibility Criteria:		Submit 90 days prior to launch date. TO: FM, PM			
Scope:					
Content:	Sorted by: JON, Annex Section (RC/CC), Annex Section Description (RC/CC title). EEIC, EEIC title, Test No., FY, Hours, Amount.				
Format:	Format must be approved by Government. Must be a flat ASCII unformatted database file.				
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	044	**OPR/IPT:**	PM	**Revision Date**	
Product Name	JON Scrub Costs				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.1.5	
WBS No: 1.5		**WBS Subtask No:** 1.5		**CLIN:** 0001	
Customer Accessibility Criteria:		Submit 7 working days after all launch scrub related costs are collected. TO: FM, PM			
Scope:					
Content:	Guidance only: sorted by JON, Annex Section (RC/CC), Annex Section Description (RC/CC title). EEIC, EEIC title, Test No., FY, Hours, Amount.				
Format:	Format must be approved by Government. Must be a flat ASCII unformatted database file.				
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	045	**OPR/IPT:**		**Revision Date**	
Product Name					
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**		
WBS No:		**WBS Subtask No:**		**CLIN:**	
Customer Accessibility Criteria:					
Scope:					
Content:					
Format:					
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	046	**OPR/IPT:**		**Revision Date**	
Product Name					
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**		
WBS No:		**WBS Subtask No:**		**CLIN:**	
Customer Accessibility Criteria:					
Scope:					
Content:					
Format:					
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	047	**OPR/IPT:**	Quality	**Revision Date**	
Product Name	Quality Program Plan				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.5-1	
WBS No:	5.0	**WBS Subtask No:**	5.0	**CLIN:**	0001
Customer Accessibility Criteria:		120 DAC, Updated as Required.			
Scope:					
Content:	Reference: DI-QCIC-81449				
Format:	Contractor format acceptable.				
Guidance Documents:		ISO 9000			
Remarks	The Quality Program Plan shall describe the contractor's intent to interface with Government quality assurance personnel. Special attention shall be given to lines of communication and cooperation. Notify when available				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	048	**OPR/IPT:**	Ordnance	**Revision Date**	
Product Name	Workload Activity Summary				
Source:		**Basic Program Resp:**			
Contract No:			**SOW No:**	3.6.2-1	
WBS No: 6.2		**WBS Subtask No:** 6.2		**CLIN:** 0001	
Customer Accessibility Criteria:		Update weekly To: PM, SE, MOCC, customers			
Scope:					
Content:	Total to date activity, past week, and future projections based on current range schedule.				
Format:	Contractor format acceptable				
Guidance Documents:					
Remarks	Workload activity broken out by customer, as well as, in total				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	049	**OPR/IPT:**	Ordnance	**Revision Date**	
Product Name	Safety Surveillance Checklists				
Source:		**Basic Program Resp:**			
Contract No:			**SOW No:**	3.6.2-1	
WBS No: 6.2		**WBS Subtask No:** 6.2		**CLIN:** 0001	
Customer Accessibility Criteria:		TO: SE			
Scope:					
Content:					
Format:					
Guidance Documents:					
Remarks	Approval required by SE. Conducted at least monthly.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	050	**OPR/IPT:**	Ordnance	**Revision Date**	
Product Name	Ordnance Training and Certification Program				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**	3.6.2-2.1		
WBS No: 6.2		**WBS Subtask No:** 6.2		**CLIN:** 0001	
Customer Accessibility Criteria:		TO: SE			
Scope:					
Content:	See Technical Library for guidance				
Format:					
Guidance Documents:					
Remarks	Approval required by SE.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	051	**OPR/IPT:**	Ordnance	**Revision Date**	
Product Name	Ordnance Materials Account Status				
Source:		**Basic Program Resp:**			
Contract No:		**SOW No:**	3.6.2-2.3		
WBS No: 6.2		**WBS Subtask No:** 6.2		**CLIN:** 0001	
Customer Accessibility Criteria:		As required To: customers			
Scope:					
Content:					
Format:	Contractor format acceptable				
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	052	**OPR/IPT:**	Ordnance	**Revision Date**	
Product Name	Ordnance Materials Account Transactions				
Source:		**Basic Program Resp:**			
Contract No:			**SOW No:**	3.6.2-2.3	
WBS No: 6.2		**WBS Subtask No:** 6.2		**CLIN:** 0001	
Customer Accessibility Criteria:		As required To: customers			
Scope:					
Content:					
Format:	Contractor format acceptable				
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	053	**OPR/IPT:**	Training	**Revision Date**	
Product Name	Operational Training and Badging Plan				
Source:		**Basic Program Resp:**			
Contract No:			**SOW No:**	3.6.3-1	
WBS No: 6.3		**WBS Subtask No:** 6.3		**CLIN:** 0001	
Customer Accessibility Criteria:		Updated as required TO: OG Squadrons, OG Training, MOCC			
Scope:					
Content:	Reference: DI-ILSS-81080/T. Explain method for keeping material current, include course descriptions; course length; training sequences; how often course taught, etc.				
Format:	Contractor format acceptable				
Guidance Documents:		AFMAN 36-2234			
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	054	**OPR/IPT:**	Training	**Revision Date**	
Product Name	Operational Training and Badging Database				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.6.3-1	
WBS No: 6.3		**WBS Subtask No:** 6.3		**CLIN:** 0001	
Customer Accessibility Criteria:		Updated as required TO: OG Squadrons, OG Training, MOCC, individuals and training coordinators restricted to appropriate respective data			
Scope:					
Content:	Reference: DI-ILSS-81080/T. Include course names; course length; training sequences; training schedule, including 90-day forecast; list of personnel trained, by organization and function requiring the training; when individual was trained and when next class is due; and identify class attendance within 24 hours of attendance, etc.				
Format:	Contractor format acceptable				
Guidance Documents:		AFMAN 36-2234			
Remarks	Allow capability to schedule personnel directly.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	055	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Visitor Records Center Database				
Source:			**Basic Program Resp:**	3.6.4-1	
Contract No:			**SOW No:**		
WBS No: 6.4		**WBS Subtask No:** 6.4		**CLIN:** 0001	
Customer Accessibility Criteria:		Ensure personnel data is NOT accessible to unauthorized users. Metrics updated monthly Access lists as required			
Scope:					
Content:	Metrics should include proposed, actual, and cumulative data for incoming and outgoing visit requests. Access lists should include names, Social Security Numbers, Security clearance, etc., either by facility, mission, or organization (as needed).				
Format:					
Guidance Documents:					
Remarks	Keep track of personnel security clearances				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	056	**OPR/IPT:**		**Revision Date**	
Product Name					
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**		
WBS No:		**WBS Subtask No:**		**CLIN:**	
Customer Accessibility Criteria:					
Scope:					
Content:	.				
Format:					
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	057	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Commodity Status Report				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.6.5-1	
WBS No: 6.5		**WBS Subtask No:** 6.5		**CLIN:** 0001	
Customer Accessibility Criteria:		Update report monthly as a minimum TO: OG Squadrons			
Scope:					
Content:	Reference: DI-MGMT-80899/T				
Format:					
Guidance Documents:					
Remarks	By spacecraft program/launch program, track and report the following milestones: commodity arrival, Process Waste Questionnaire (PWQ) completion, Technical Response Package (TRP) completion, Hazardous Waste Manifest (HWM) completion, transfer to disposal officer scheduled, transfer to disposal officer completed, etc.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	058	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Spaceport Intranet Information System User Guide				
Source:		**Basic Program Resp:**			
Contract No:			**SOW No:**	3.1.6-2.5	
WBS No: 1.6.1		**WBS Subtask No:** 1.6.1		**CLIN:** 0001	
Customer Accessibility Criteria:		TO: PM, OG Squadrons, any Spaceport Intranet Information System user			
Scope:					
Content:	Show how various types of users such as PM, OG Squadrons, customers, MOCC, LG Maintenance Squadron, could use system to full advantage				
Format:	Both on-line, hypertexted format ,and paper documents format required. Details of each formats may be determined by Contractor				
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	059	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Spaceport Intranet Information System Index				
Source:		**Basic Program Resp:**			
Contract No:			**SOW No:**	3.1.6-2.5	
WBS No: 1.6.1		**WBS Subtask No:** 1.6.1		**CLIN:** 0001	
Customer Accessibility Criteria:		TO: PM, OG Squadrons, users			
Scope:	Provides on-line reference index to both on-line and paper library. Provides full text search capability for majority of on-line documents.				
Content:					
Format:	Contractor format acceptable				
Guidance Documents:					
Remarks	Compliments but does not necessarily encompass database query functions.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	060	**OPR/IPT:**	PM	**Revision Date**	
Product Name	Resource Data Exchange Standard Specification				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.1.6-2.7	
WBS No:	1.6.2	**WBS Subtask No:**	1.6.2	**CLIN:**	0001
Customer Accessibility Criteria:		All			
Scope:	Resource Data Exchange Standard Specification shall include a defined data set and structure, and a communications methodology that will allow the automated communication of information regarding Wing resources. Resources include any support facility, equipment, vehicle, unit, service, or location, provided by or requested through the 45 SW by a user, either internal or external.				
Content:	The data set and structure shall provide for 1) a unique identifier for each resource, 2) data concerning the status and capability of the resource to include all information appropriate for normal use and management of the resource, 3) data concerning the availability and anticipated use of the resource to include schedule information for a time period appropriate to the use of the resource, and 4) data concerning requested uses to include all information normally relevant to such use. Include definition of the communications methodology or protocol as appropriate for both sender and receiver.				
Format:	Contractor format acceptable, should generally follow format of commercial or government standard closest in type				
Guidance Documents:	Draft Example Resource Data Exchange Standard dated 6 Feb 97; FIPS 161-2, FIPS 193, RSA IIA Scheduling System Background and Data Structures (DRAFT) 15 Aug 97, Joint Technical Architecture ver 2.0 - Draft, 18 July 97				
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	061	**OPR/IPT:**		**Revision Date**	
Product Name					
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**		
WBS No:		**WBS Subtask No:**		**CLIN:**	
Customer Accessibility Criteria:					
Scope:					
Content:					
Format:					
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	062	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Communications Plan				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.6.1.1-1	
WBS No:	6.1.1	**WBS Subtask No:**	6.1.1	**CLIN:**	0001
Customer Accessibility Criteria:		Access draft 30 days prior to scheduled use. Final Plan access 15 days prior to scheduled use.			
Scope:					
Content:	Reference: DI-MGMT-80057/T, The Communication Plan shall contain: 1. Acronyms and Abbreviations. 2. Related Documentation 3. Net Descriptions. 4. Facility Level Matrices: - Nonsecure Voice Net Assignments. - Nonsecure Voice Circuit Numbers. - Secure Voice Net Assignments. - Secure Voice Circuit Numbers. - Voice Direct Lines (VDLs). - Teletype. - Television Cameras. 5. In addition, the following organizations may require draft/final hard copies: LMA/M240, L-3 Communications Corp.,OD-4/DL				
Format:					
Guidance Documents:					
Remarks	Data for the communication plan must be obtained from other ER contractors.				

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	063	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Mission Script				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.6.1.2-1	
WBS No: 6.1.2		**WBS Subtask No:** 6.1.2		**CLIN:** 0001	
Customer Accessibility Criteria:		Access to draft 30 days prior to scheduled use. Final script 10 days prior to scheduled use, in hardcopy. If requested, additional hardcopies to 45 RANS/DOUY, ASC/ERD, RTS, LMA/M240, L-3 Communications Corp., OD-4/DL			
Scope:					
Content:	Reference: DI-MGMT-80057/T. The mission script shall contain: 1. Minus and Plus Count Sequence of Events. Include the following as a minimum: - Item number, time event performed, description of event, net/circuit event performed on, By/To agency's call signs. - Requirement for TOPS, VDL, facsimile, and teletype checks. - Range/Contractor GO/NO GO status checks. 2. Trouble Reporting Procedures. 3. Primary and Backup Voice Nets. 4. Key Personnel Descriptions and Call Signs. 5. Net Descriptions & Voice Matrices. 6. Facsimile Directory. 7. Acronyms/Abbreviations.				
Format:					
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	064	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Launch Operations Handbook				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.6.1.3-1	
WBS No: 6.1.3		**WBS Subtask No:** 6.1.3		**CLIN:** 0001	
Customer Accessibility Criteria:		Titan: submit draft 15 calendar days prior to scheduled use; final 5 calendar days prior to scheduled use. Provided as hardcopy (also see remarks)			
Scope:					
Content:	Reference: DI-S-3556/T				

TITAN MISSIONS ITEM	TIMELINE	SUPPLIED BY
A. Mission Description		
- Launch Vehicle Mission Profile and Payload Summary	L-20 days	AFLC*
- F-O Bar Chart	L-20 days	AFIC
- Countdown Events Summary	L-15 days	AFIC
- Mission Script		LO&SC*
- Launch Support Plan (AFLD, ALD only)	L-15 days	AFLC*
- Typical Titan IV/Upper Stage Flight Profile	L-20 days	AFLC
- Mission Specific Flight Profile		LO&SC
- Ground Trace		LO&SC*
- Flight Mark Events		LO&SC*
- Launch Window		LO&SC
B. Key Personnel		
- Key Personnel and Call Signs (reference script)		LO&SC
- Launch Management Flow	L-20 days	AFLC
C. Countdown Operations		
- Mandatory Hold Letter	L-10 days	AFLC
- Master Countdown Constraints Index	L-20	
- Master Countdown Procedure (OFO2)	L-15 days	AFLC
- Payload Launch Commit Criteria	L-15 days	AFLC
- Titan IV/Upper Stage Recycle Requirements	L-20 days	AFLC
- Recycle Options		LO&SC
- Balloon Data		LO&SC
- Day of Launch Winds Management Handbook		LO&SC
- ARIA Matrix (if required)		LO&SC
- Launch Constraints Document	L-15 days	AFLC
D. Communications		
- Comm Systems Overview		LO&SC
- Console Operations		LO&SC
- Console Level Voice Matrix (reference script)		LO&SC
- Net Description – Secure and Nonsecure (reference script)		LO&SC
- Recommended Camera Views and Video Assignments		LO&SC
- ROCC TV Guide (ROCC books only)		LO&SC
- STU III Directory (reference script)		LO&SC
- FAX Directory (reference script)		LO&SC
- LDS Display		LO&SC
E. Drawings		
- Titan Stage I and II Engine Diagrams		LO&SC
- Upper Stage Diagrams		LO&SC
- Facility Power Diagrams		LO&SC
- GN2 Schematic		LO&SC
- HVAC Flow Diagram		LO&SC
F. Impact/Anomaly Plans		
- Expendable Launch Vehicle Launch Mishaps Plan OI		AFLC
- Launch Disaster Control Group Letter		AFLC
- Recovery Action Team Letter		AFLC
- Problem Resolution Plan		LO&SC
G. Abbreviations (reference script)		

*These sections may be classified and will be produced as inserts to the preliminary and only 20 of the final copies.

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION (ADP No: 064 concluded)

ATLAS MISSIONS

A. Mission Description
- Launch Vehicle Mission Profile and Payload Summary
- Countdown Events Summary
- Mission Script
- Launch Support Plan (AFLD, AFALD, AFLC, AFALC)
- Mission Specific Flight Profile
- Ground Trace
- Flight Mark Events
- Launch Window

B. Key Personnel
- Key Personnel and Call Signs (reference script)
- Launch Management Flow

C. Countdown Operations
- Mandatory Hold Letter
- Master Countdown Constraints Index
- Payload Launch Commit Criteria
- Recycle Options
- Balloon Data
- Day of Launch Winds Management Handbook
- ARIA Matrix (if required)
- Launch Constraints Document
- Range Mandatory Hold Criteria

D. Communications
- Comm Systems Overview
- Console Operations
- Console Level Voice Matrix (reference script)
- Net Description - Secure and Nonsecure (reference script)
- Recommended Camera Views and Video Assignments
- ROCC TV Guide (ROCC books only)
- STU III Directory (reference script)
- FAX Directory (reference script)
- LDS Display

E. Drawings
- Atlas Launch Vehicle/Atlas Centaur

F. Impact/Anomaly Plans
- Expendable Launch Vehicle Launch Mishap Plan OI
- Launch Disaster Control Group Letter
- Recovery Action Team Letter
- Anomaly Resolution Plan
- Anomaly Team Composition

G. Abbreviations

NOTE: Products developed by agencies other than LO&SC will be inserted into the handbooks, not recreated.

Format:	
Guidance Documents:	
Remarks	Provide updated electronic version for squadron training purposes

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	065	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Console Level Voice Matrix				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.6.1.4-1	
WBS No:	6.1.4	**WBS Subtask No:**	6.1.4	**CLIN:**	0001
Customer Accessibility Criteria:		As required TO: OG Squadrons, users			
Scope:					
Content:	Comm matrix for entire selected community involved in operation at CCAS, not just payload				
Format:					
Guidance Documents:					
Remarks					

LO&SC ACCESSIBLE DATA PRODUCT DESCRIPTION					
ADP No:	066	**OPR/IPT:**	Mission	**Revision Date**	
Product Name	Seating Plan				
Source:			**Basic Program Resp:**		
Contract No:			**SOW No:**	3.6.1.4-1	
WBS No:	6.1.4	**WBS Subtask No:**	6.1.4	**CLIN:**	0001
Customer Accessibility Criteria:		As required TO: OG Squadrons, users			
Scope:					
Content:	Seating plan for entire selected community involved in operation at CCAS				
Format:					
Guidance Documents:					
Remarks					